The Croonian Lectures
ON
CEREBRAL LOCALISATION.

Delivered before the Royal College of Physicians of London,

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LECTURE IV.
THE AUDITORY CENTRE.

MR. PRESIDENT AND GENTLEMEN,—Among the reactions consequent upon electrical stimulation of the cortex there is one, or rather an assemblage of reactions, which might almost be considered of itself indicative of the existence of subjective auditory sensation—a reaction which guided me in my first attempts to define the auditory sphere by the destructive method. The reaction in question is that which occurs on irritation of the superior temporal convolution and its homologues in the lower vertebrates—namely, quick retraction or pricking of the opposite ear, associated frequently with opening of the eyes, dilatation of the pupils, and turning of the head and eyes to the opposite side. These are just the phenomena which occur when a shrill sound is suddenly made in a monkey's ear, as I have found by actual experiment. The reaction, however, varies somewhat in its completeness. After the first surprise is over, the repetition of the experiment always induces the pricking or retraction of the ear, but generally fails to induce the other parts of the reaction—namely, the intense look of surprise, and direction of the head and eyes to the supposed source of the sound. The results are still more characteristic on stimulation of the homologous region (Fig. 14) in those animals whose habits are such as to make their safety largely dependent on the acuteness of their hearing. The region in question is the posterior division of the third external or supra-Sylvian convolution. The reaction common to all these is pricking of the opposite ear, but the other factors vary in intensity. In the lop-eared rabbit irritation of this region causes sudden elevation of the ear, as well as retraction and exposure of the mouth of the auricle towards the referred region of the sound. Occasionally the animal makes a sudden start and movement, as if to bound off the table. In the wild jackal, also, I observed on one or two occasions that the application of the electrodes to this region caused the animal to make a sudden spring or bound forward, pricking up both ears as if suddenly startled. If the movements of the eyeball on stimulation of the occipito-angular region are to be regarded as signs of arousal of subjective visual sensation, we have, I think, in the reactions under consideration still more characteristic indications of the arousal of subjective auditory sensation. The determination, however, of affections of hearing is not so easy as that of sight in the lower animals. It is difficult to discriminate between mere reflex starting to sounds and hearing proper. Nor is it easy to avoid mere coincidences, or to entirely avoid attracting the animal's attention by other channels of perception, such as sight, or smell, or sense of proximity conditioned by vibration, warmth, agitation of the air, and such like. The animal's present behaviour should be compared with its past, and with that of normal animals under conditions of variation of sound, all other things remaining the same. And even when all these precautions are taken, it is extremely difficult to avoid every source of fallacy. Hence it may happen, as it has actually happened, that different observers may arrive at different conclusions, and animals may be taken to be deaf which are not in reality so, simply because they do not respond to the test employed, or *vice versâ*.

In one of my earlier experiments, in which the upper two-thirds of the superior temporal convolution were destroyed on both sides, the following note was made as to the condition of the monkey the day after the operation.[1] "Sight was good and tactile sensation unimpaired. Various experiments were made to ascertain the existence or not of hearing, but it was not easy to devise a test, as the animal was continually on the alert, and it was not easy to make a sound without in any way attracting its attention by sight. The following method was tried: While the animal was sitting quietly by the fire, I retired to the other room, and, while watching through the chink of the half-shut door, called loudly, whistled, knocked on the door, tinkled glass, &c., without ever causing it to look around or give any sign of having heard. I then cautiously approached the animal, and not till it saw me did it give any sign of consciousness of my presence. When the same experiment was repeated while the monkey and its companion were quietly seated at the fire enjoying the heat, it gave no sign of hearing, while its companion started with alarm, and came with curiosity to ascertain the cause of the sound. Ten hours afterwards, in the presence of Dr. Burdon Sanderson, I repeated the various tests with the view of eliciting signs of hearing. To all it remained without response. It seemed unconscious of my presence when speaking close to its ear, and only started when it caught sight of me."

I recorded also four other experiments,[2] in which, along with destructions of other portions of the temporal lobe, the superior temporal convolution was invaded, unilaterally or bilaterally. In two of the cases (11 and 12), in which the temporal lobe was destroyed only on one side, there was impairment or total abolition of reaction to sound when the ear on the same side was plugged; and in the two other cases, in which the destruction was bilateral, no signs of hearing could be elicited during the short period which the animals were allowed to survive, though, in other respects, they were fully on the alert. In these experiments, however, the time that elapsed between the infliction of the lesion and the death of the animals was not sufficient to establish any very reliable data as to the permanency of the impairment of the sense of hearing, which was undoubtedly, however, affected in all for the time being. In my subsequent investigations, in conjunction with Professor Yeo, however, it was established in the first place by an extensive series of experiments on the temporal lobe[3] that no signs of impairment of hearing could be detected when every part of the temporal lobe was destroyed, except the superior temporal convolution. What appeared to us, and most of those who saw it, conclusive evidence of the relation of the superior temporal convolution to the sense of hearing, was the behaviour of a monkey in which both superior convolutions were actually or potentially destroyed by means of the cautery. Where the cortex was not absolutely removed, the grey matter was undermined, and the medullary fibres destroyed by the action of the radiant heat. This monkey was exhibited before the assembled physiologists at the International Medical Congress in London in August, 1881, and was admitted by all to be deaf, so far at least as that could be determined by comparing its behaviour with that of a normal animal to the explosion of a percussion cap in the room.

As questions were raised in regard to the actual condition of this animal before and after the operation by the experiments of Professor Schäfer, to which I am about to allude, I have published a full account of my notes and observations on this animal.[4] Briefly, these were as follows: In all other respects, except as to hearing, it was in a perfectly normal condition. During the first four days after the operation, no signs of hearing could be elicited by any sounds made in its vicinity, and which invariably attracted the attention of normal monkeys. While the other animals were observed eagerly listening to approaching footsteps, this animal made no sign of attention until the person came within range of vision. It was observed also that, at first at least, the ears of the animal did not twitch as they do in monkeys which undoubtedly possess the sense of hearing, but it was doubtful whether the absence of reaction in the ears continued during the whole time that the animal survived. Almost daily examination was made during the thirteen months that it was allowed to live. To sounds of various kind, such as calling by name, to which it used always to respond, tapping, whistling, ringing of bells, shuffling of feet on the floor (a sound which normal monkeys are particularly quick to notice), this animal paid no attention.

[1] Experiment 15, Phil. Trans., vol. cclxv., part ii., 1875.

[2] Experiments 11, 12, 13, 14, op. cit., p. 462.
[3] Philosophical Transactions, part ii., 1884.
[4] Brain, April, 1888, p. 13.

Occasionally, however, it seemed to start coincidently with loud sounds made in its vicinity, so that doubts were constantly being raised as to whether it was absolutely deaf or not. These reactions were considered to be probably mere coincidences, for in general it did not even start when a percussion cap was exploded near it. Six weeks after the operation, while the animal was disporting itself before the assembled physiologists at the Medical Congress, it paid no heed to the explosion of a percussion cap, while another monkey, exhibited at the same time, started visibly, as, in fact, did the whole audience. From this time onward the tests were constantly repeated and varied in every conceivable manner, but the results were essentially the same, and the conclusion seemed to be justified that the animal was essentially deaf, and that the occasional start which it made to loud sounds was either coincidence or merely of the character of the reflex start, which may occur in animals after removal even of the whole cerebral hemispheres.

Schäfer, in his earlier experiments, in conjunction with Horsley, did not arrive at any very definite conclusions with regard to the sense of hearing, though in one of their experiments,[5] in which they had removed the right temporo-sphenoidal lobe, the animal did not seem to hear slight sounds when the ear on the same side as the lesion was stopped. But, working with Sanger-Brown, he succeeded in removing all doubts which he might have entertained on the question, and in convincing himself that hearing was not in the slightest degree affected after complete removal, not only of the superior temporal gyri, but of the whole temporal lobe itself on both sides. He thus describes the result of their experiments:[6]—

"In six monkeys we have more or less frequently destroyed the superior temporal gyrus upon both sides. I say more or less completely because in one or two a small shred of grey matter belonging to this convolution was found post mortem, but practically the lesion was complete in all six, some of the grey matter within the fissures bounding the gyrus being all that could be taken to represent the convolution, and even this being deprived of its medullary centre. But in order to make assurance doubly sure, we, in one monkey, a large female Rhœsus, separated up the fissures bounding the gyrus and scooped it out entirely from the very bottom of the fissures, so that not a trace of the convolution in question should remain. In all six cases the result was the same. Hearing was not only not permanently abolished: it was not perceptibly affected. The animals, even immediately after recovery from the anæsthetic, reacted to slight sounds of an unusual character, such as smacking of the lips or the rustle of a crumpled newspaper. Some of them were under observation for several months, and there never was any doubt in our minds as to the full possession of their auditory faculties. Nor could the reactions they exhibited to sounds be explained by supposing that they only responded in a reflex manner, for they gave every evidence of understanding the nature of different sounds, such as that caused by turning a door-handle or the differences between the footsteps of different people, varying emotion being exhibited according to the anticipations (of food, &c.) which the sounds called forth."

Two of these animals, in which the destruction of the superior temporal convolution seems to have been most complete, were examined by several members of the Neurological Society. Two, who, however, did not record the tests they employed, were of opinion that the animal heard; while another thought on one occasion that one of the animals could hear, at another time that it seemed deaf on the left side, and on still another occasion that it did not seem to react to sound so readily and completely as a normal animal.[7]

As illustrating the difficulty of arriving at definite conclusions on this matter, one member of the Society thought that a perfectly normal monkey was quite deaf, and another that an animal in which both superior temporal gyri had been removed was also deaf. Schäfer[8] believes that I also was satisfied as to the existence of perception of auditory perception in his animals. Such examination as I made of them did not, I think, furnish any unequivocal evidence on the point. An unaccountable discrepancy between Schäfer's results and Yeo's and mine thus appeared to exist. If in his animals hearing was not perceptibly affected by the double lesion, this certainly was not the case in ours; for there was no question as to the profound difference between it and a normal monkey, and the only doubt was whether it had any real sense of hearing at all.

In order, if possible, to clear this matter up, I have lately reinvestigated the question. In one monkey I removed, first, the whole of the convex aspect of the left temporal lobe, including the superior temporal gyrus. The animal speedily recovered from the unilateral operation, and for the first few days, though undoubtedly it heard, it seemed to hear less distinctly towards the right than towards the left. A fortnight afterwards a similar operation was performed on the right side; but though the animal lived five days it remained in a state of great apathy. It took no notice of what was going on around it, and was altogether indifferent to the loudest sounds made in its vicinity. The experiment, therefore, on account of the short period of survival, was not quite a satisfactory one. Another monkey in which I performed the operation of bilateral extirpation of the superior temporal gyrus, with an interval of one month between the two operations, was specially well adapted for experimentation in regard to the sense of hearing. It was a remarkably tame dog-faced monkey, and its character and modes of behaviour under different circumstances were made the subject of careful study before it was operated upon. It was a noisy, talking monkey. It invariably responded when called to by name, and came immediately when called. It imitated smacking of the lips and other sounds of endearment. It always shouted vigorously and loudly when anyone approached or opened the door leading down to the laboratory in which it was kept. The rustling of a paper bag, from which it was accustomed to receive sweetmeats and nuts, was the signal for vociferous cries, as also any movement of the handle of a drawer in which apples and fruits were kept. It had an insatiable appetite, and was always clamouring for food, of which it never seemed to have enough. It had also an insatiable thirst, and the sound of plashing of water, made by turning on the water-tap, caused it to shriek to be let out and put its mouth under the tap. Not a sound could be made in its vicinity, or a movement of its companion monkeys in the other cages, without exciting its active attention. It was full of fun and mischief, and in every respect an animal unusually adapted for determination of any alterations that might occur in respect of its auditory or other faculties. The left temporal superior convolution was scooped out on Oct. 8th. (As will be seen in the photograph, a small portion also of the middle temporal gyrus was destroyed) (Fig. 16).

The next day, owing to the occurrence, as afterwards proved, of some recurrent hæmorrhage and tension in the wound, there were one or two slight epileptic seizures affecting the right side. These, however, ceased entirely when the wound was redressed, and the animal was speedily quite bright and active.

On the second day it turned its head to the dangling of keys close to its left ear, but it did not do so, or very doubtfully, to the same test applied to the right. Next day, and from that time onwards, it appeared, as regards its hearing, in every respect as it had been before the operation. It was noted, however, that it had become completely hemiopic to the right—a condition which lasted more or less completely until its death five months subsequently. This hemiopia proved after death to be due in all probability to the recurrent hæmorrhage which occurred on the day after the operation, ploughing up the optic radiations in the occipito-angular region.

On November 5th the superior temporal gyrus of the right side was similarly exposed and scooped out. This time the lower extremity of the gyrus almost entirely escaped (Fig. 17). On the following day the animal made no response to any sounds made in its vicinity, nor when the door leading to the laboratory was slammed, nor to the noise of footsteps on the stairs which formerly used to excite lively demonstrations. On the third day, though otherwise alert and bright, it made no reaction to sounds of any kind, did not reply to calls, did not notice the noise of footsteps on the stairs, exhibited no sign of perception when the water-tap was turned on, though it was evidently intensely thirsty, as it drank eagerly when water was presented to it; paid no attention to the cries of two animals which were placed in the adjoining cage, and, in general, responded to none of

[5] Experiment 20, Phil. Trans., 1880.
[6] Brain, vol. x., p. 373.
[7] See Brain, July 1889, p. 164.
[8] Phil. Trans., 1888, B. xxx., p. 325.

the tests of hearing which formerly aroused its active interest. On the seventh day the condition was essentially the same. It paid no heed when called to, or when the door leading to the laboratory was slammed. The rattling of the drawer in which the food was kept or the rustling of the paper bag containing the sweetmeats were altogether unnoticed; the plashing of water was unheeded; and it went on quietly with its occupation, eating or searching for food on the floor of its cage, while various sounds, such as springing a rattle, loud barking, whistling, &c., were being made, which startled the other animals in adjoining cages. On the tenth day the condition was essentially the same. There was no reaction to calls, shuffling of feet, &c., which caused other two normal monkeys in the adjoining cage to peer curiously. On this day a test was employed to which it formerly invariably responded. It was late in the evening. I put out the light in the laboratory and ascended the stairs and shut the door. Several times I opened the door and called the animal by name. One of the other monkeys called back in reply, but no response was made by this animal. On former occasions

FIG. 16.

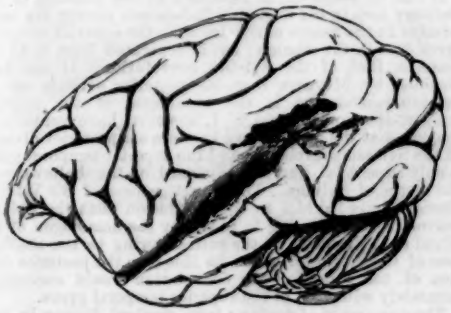
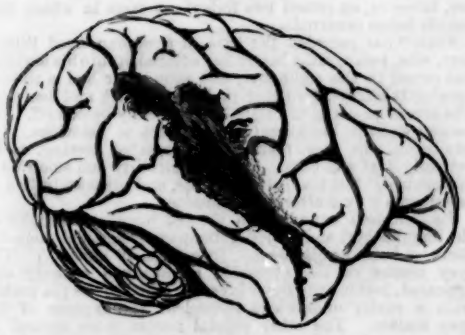


FIG. 17



this was the signal for shrill and loud outcries. On the following day the same tests were repeated, and with the same results. It was very fond of the laboratory attendant, and would invariably go to him if he called it. On this day, while it was on the table and watching my movements, the laboratory attendant came down the stairs and, standing behind it, called it repeatedly. The animal paid no attention whatever, and never once turned its head in his direction.

On November 20th (fifteen days after the operation) the following notes were made:—

"The animal well and active, occasionally uttering grunts of satisfaction while sitting quietly by the fire. It also cries loudly when it wants food, but it never responds when called to; pays no attention to the familiar sounds, such as opening the drawer containing the apples or turning on the water-tap, which formerly excited in it lively demonstrations. To-day a box containing a whistle, capable of being blown by a long indiarubber tube in such a manner as to avoid attracting the animal's sight, was placed in its cage and the whistle repeatedly blown, but it was absolutely unmoved. The same experiment with three other monkeys caused signs of alarm and perturbation."

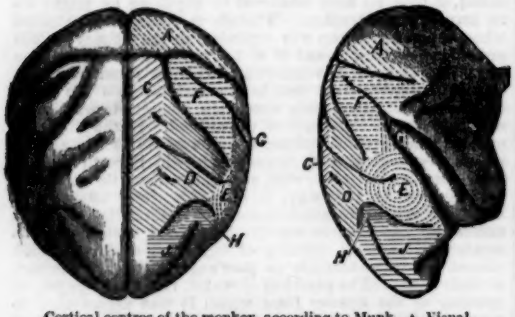
About this time the question began to be raised whether the animal did not seem to be aware, by a sense of vibration or otherwise, of the approach of footsteps descending the spiral staircase leading into the laboratory. It was quite certain, however, that while it was being watched and its attention thus occupied, it seemed quite unconscious of any sound made to divert it. On November 30th—that is, three weeks after the operation—these observations were confirmed after careful study by myself and assistant for several hours. But when all was still it seemed to be aware, as evidenced by its cries, of the proximity of anyone walking on the floor overhead, or opening the door leading down into the laboratory. This was noticed more particularly in the early morning, when this and the other monkeys were eagerly looking towards the stairs expecting their breakfast. Repeated observations during the course of the following week succeeded in clearing up the apparent irregularities in its reactions. It became evident that when the animal was left to itself it was aware of being called to, or of the sound of opening or slamming the door leading to the place in which it was kept; but when anyone was present in the laboratory, and the animal occupied in observing him, it showed no signs of hearing, and did not look round like the other monkeys when called to or when sounds of various kinds were made. If I waited in the laboratory, within the range of the animal's vision, and my assistant went to the top of the stairs and called, it paid no heed whatever to anything he might do to attract its attention. Though it occasionally started when a percussion cap was exploded in its vicinity, it did not do so or look round if it happened to be engaged on anything else at the moment, whereas other monkeys would invariably start and look round towards the cause of the sound; and this condition remained practically unchanged until the death of the animal. In the direction of the laboratory door alone, towards which it was almost constantly looking, with expectation, did it seem able to refer sounds, but otherwise, especially when its attention was diverted in any way, it seemed entirely unaware of their origin, and did not turn its head in their direction. It either did not hear or wholly disregarded such sounds as scratching, tapping, rattling of keys, and so forth, which caused the other animals to peer eagerly through the bars of their cages. The plashing of water, rustling of paper, or opening of the drawer from which it was accustomed to receive choice morsels never excited any notice, and caused none of the lively signs of interest which formerly were so characteristic. I did not observe in this animal, at least during the latter periods of observation, that absence of the twitching of the ears which I had noted in a previous experiment.

The condition of this animal may, therefore, be stated briefly as follows. At first it failed absolutely to respond to any of the tests which formerly excited active reaction, and which invariably attracted the attention of normal monkeys. To the last, with the single exception perhaps of the door of the laboratory, from which it was always expecting something, it never realised the origin of sounds; it was altogether indifferent to sounds which formerly were full of significance to it, and all that could be said was that it was not, when otherwise occupied, insensible to sonorous vibrations. And it would have been difficult to make this out with any degree of certainty, had it not been that the animal was one qualified to give oral testimony of the fact. Whether this form of auditory sensibility is to be attributed to portions of the cortical auditory centres undestroyed by the lesions described, or to subcortical or mesencephalic centres, I am not yet in a position to decide. I have not yet been able successfully to carry out observations on animals in which the temporal lobes have been destroyed on both sides; but if, as Schäfer's experiments seem to indicate, the whole of the temporal lobes, like the other cerebral lobes, may be removed without entirely abolishing reaction to sounds, we should have reason for believing, with Longet Goltz, and others, that in monkeys, as well as lower mammals, a crude and simple form of auditory sensation is still possible through the agency of the lower centres.

Munk, from his experiments on dogs, states that destructive lesion of the point B (Fig. 14), situated towards the lower extremity of the supra-Sylvian and adjacent extremity of the second external convolution, causes a condition as regards hearing similar to that resulting from destruction

of A_1 (Fig. 14) in the sphere of vision; a condition which he terms "psychical deafness" (*Seelentaubheit*). The dog seems to hear, but is unable to interpret the sound that it hears. This condition, however, lasts only for a few weeks at most. The animal again learns the meaning of sounds, and becomes restored to its normal state. In this region are stored up, according to him, the auditory pictures, similar to the visual pictures in the region A_1 (Fig. 14). Frequently, however, before the secondary disturbances created by the primary lesion have subsided, the animal appears to be totally deaf, so that it exhibits no reaction to any kind of sound, however loud. Occasionally, when the whole of the cortex of both temporal lobes had been destroyed, he has observed persistent "cortical deafness" (*Rindentaubheit*), as he terms it, but as none of the animals on which he has performed this operation seem to have lived beyond a few days, his experiments do not afford data for the determination of the duration of this complete deafness. He, however, assumes that the auditory area of the cortex embraces a much larger extent than B, and includes, according to his figures, the whole of the posterior half of the third, and also of the posterior or lower divisions of the first and second external convolutions. With respect to the auditory sphere in the brain of the monkey, he assumes—for he does not appear to have performed any experiments bearing on this point—that it is situated at the lower extremity of the middle temporal gyrus (B, Fig. 18),

FIG. 18.



Cortical centres of the monkey, according to Munk. A, Visual area. C to J, Tactile sensory areas (*Fühlsphären*) of Munk's psycho-motor areas of other authors. D, Fore-limb region. C, Hind-limb region. E, Head region. F, Eye region. G, Ear region. H, Neck region. J, Trunk region. B is placed upon that portion of the cortex which, from experiments on dogs, is assumed to be the auditory area.

a region which I have completely extirpated without causing the slightest affection of auditory sensation. And he considers that the upper portion of the superior or temporal gyrus (G, Fig. 18) is the sensory sphere of the ear; of this I can obtain no evidence, for neither after unilateral nor bilateral extirpation of this region have I been able to verify any affection of the sensibility of the auricle.

Luciani and Tamburini[9] found that unilateral destruction of the upper and posterior part of the third external convolution in dogs caused deafness in both ears, but to a greater extent in the ear of the opposite side. The difference in auditory sensibility on the two sides greatly diminishes, and after a few days disappears altogether, though it cannot be asserted that perfect recovery ever takes place. After comparative equalisation of the power of hearing on the two sides, removal of the corresponding region of the other hemisphere is followed by almost total deafness, approximately equal on both sides. This bilateral deafness passes off gradually, but data do not yet exist, according to them, for determining whether perfect recovery takes place. When the destructive lesions are confined to the posterior part of the second external convolution, and do not implicate any part of the third, there does not occur the slightest impairment of hearing, which, indeed, sometimes appears to be unusually keen. These authors believe that semi-decussation of the auditory nerve exists similar to that of the optic nerves, and that both ears are represented in each cerebral hemisphere. This latter is undoubtedly the case; for unilateral extirpation never gives rise to permanent deafness of the one ear; but, though I have on many occasions, after extirpation of the auditory area in one hemisphere, observed loss or impairment of hearing in the opposite ear, I have never been able to detect the slightest impairment of hearing on the ear of the same side. Luciani[10] states: "The effects of extirpations in the province of the parietal lobe confirm what was recognised by Ferrier, and afterwards by Tamburini and myself, that the bend of the third external convolution certainly makes part of the auditory sphere in the dog, but demonstrate also that this sphere irradiates from its central point in the temporal lobe, upwards towards the parietal region, forwards towards the frontal, backwards towards the hippocampal, inward towards the cornu Ammonis." He thus includes in his auditory sphere a large portion of the cortex which is concerned with other functions. In reference, however, to this and other sensory centres, Luciani appears to contend for a form of localisation which is no localisation at all, as every centre seems to perform to some extent the functions of every other centre; results which I regard as absolutely opposed by the facts of strictly localised lesions.

It will be observed, in reference to the position of the auditory area in the dog, that it does not occupy the same relation to the fissure of Sylvius that the superior temporal gyrus does in the monkey, but is separated from it by the posterior limb of the Sylvian convolution. It has been assumed by Meynert that the posterior division of the Sylvian convolution is the homologue of the superior temporo-sphenoidal gyrus.[11] I, however, have ventured to suggest that the resemblance between the posterior division of the Sylvian convolution and the superior temporal gyrus is only superficial, and is conditioned by the shallowness of the fissure of Sylvius. The investigations of Sir William Turner[12] have led him to the conclusion that the Sylvian convolution in the dog is in reality the homologue of the island of Reil, visible on the surface owing to the shallowness of the Sylvian fissure. In this case the posterior division of the supra-Sylvian convolution would correspond accurately with that of the superior temporal gyrus.

The occurrence of deafness from cerebral disease in man is unusual, owing to the extreme rarity of bilateral lesions affecting simultaneously both superior temporal gyri. There are, however, on record two important cases in which this double lesion occurred.

Shaw[13] has recorded the case of a woman, aged thirty-four, who, two months before her admission into his asylum, lost power in the right arm, and soon after had a sudden apoplectic seizure, resulting in loss of speech and deafness. The loss of power in the right hand speedily passed off. She became excited, incoherent, and subject to delusions. On admission, she was found, after repeated testing, to be perfectly deaf and blind. Tactile sensibility and smell were unimpaired. She had occasional fits, and ultimately died of pneumonia a year after her admission.

Post-mortem examination showed complete atrophy of the angular gyri and superior temporo-sphenoidal convolutions of both hemispheres. (See Figs. 19 and 20.) The grey matter of the atrophied regions had entirely disappeared, leaving the outer layer attached to the pia mater, with a cavity underneath formed at the expense of the grey matter. The other cranial nerves were normal in appearance, but the optic nerves showed increase of the connective tissue septa, atrophy of the nerve fibres, and spaces filled with a colloid-like material. Whether the blindness was due to the lesion of the angular gyri alone or to degenerative changes in the optic nerves is a question, but the sudden onset of deafness in this case, coincidently with symptoms of cerebral lesion and the condition of the brain post mortem, point to the destruction of the superior temporal convolutions as its cause. A similar case has been reported by Wernicke and Friedländer.[14] "A woman, aged forty-three, who had never suffered from deafness or affection of vision, was attacked on June 22nd, 1880, with right hemiplegia and aphasia. She remained in the hospital until August 4th, when she was discharged. At this time the patient could speak, but she spoke unintelligibly, and was sometimes believed to be intoxicated. She not only could

[9] Sui Centri Psico-Sensori Corticali, 1879.

[10] On the Sensorial Localisations in the Cortex Cerebri, Brain, 1886, p. 154.

[11] Die Windungen der convexen Oberfläche des Vorder-Hirns, Archiv f. Psychiatrie, Bd. vii., 1877.

[12] Report on the Seals, "Challenger" Expedition, Part lxviii., p. 124.

[13] Archives of Medicine, February, 1882.

[14] Fortschritte der Medicin, Bd. i., No. 6, March 15th, 1883; Brain April, 1888, p. 19.

not make herself understood, but she could not understand what was said to her. She was received into the hospital again on September 10th, with slight paresis of the left arm. The right hemiplegia had entirely disappeared. The patient was looked upon as insane. She was absolutely deaf, so that she could not be communicated with. She died of an attack of hæmatemesis on October 21st. An extensive lesion was found in each temporal lobe, invading the superior temporal convolution on both sides. (See Figs. 21 and 22.) The rest of the brain exhibited no abnormality, nor were there any conditions leading to increase of the intracranial pressure or secondary affection of the cranial nerves.

It was proved that the patient had previously enjoyed excellent hearing. Her total deafness occurred suddenly in connexion with the other indications of cerebral disease.

FIG. 19.

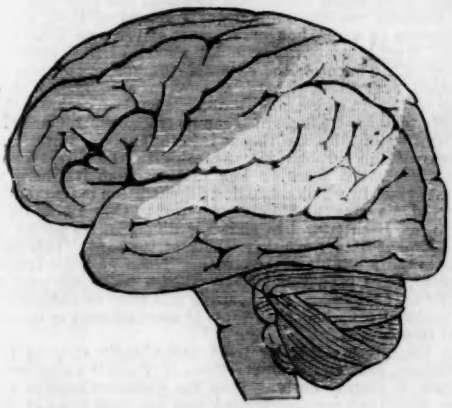
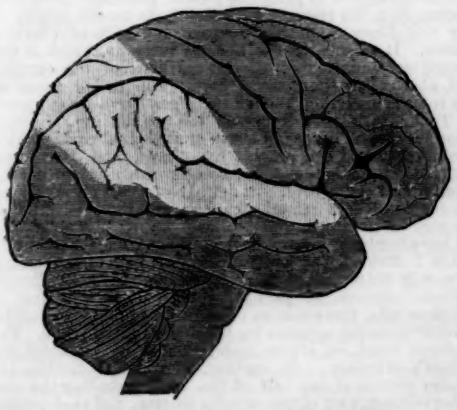


FIG. 20.



In order to exclude possible local affection of the ears these organs were submitted to examination by Professor Lucae The result of this examination was practically entirely negative, only a slight dry catarrh being found, and nothing locally to account for deafness. These authors conclude "that the auditory nerves ultimately end in the temporal lobe, and that double or bilateral lesion in these lobes causes complete deafness. It may therefore be stated with all certainty that the temporal lobes are the cerebral centres of hearing."

Though the lesions were not confined to the superior temporal gyri, yet these were involved both as to the grey matter and medullary fibres. The case, therefore, confirms, if it does not of itself suffice to indicate, the position I have assigned to the auditory centre in these gyri.

The affections of hearing with which we are most familiar in connexion with cerebral disease are the various forms of what is termed "word-deafness"—a condition in which auditory ideation is impaired, more particularly as regards the association of articulate sounds with acts of articulation and things signified. The word-deaf is not devoid of auditory sensation, for he can hear the ticking of a watch, and can recognise and hum an air, but articulate sounds, except perhaps his own name or some simple combination of words, have no meaning, and cannot be repeated. Word-deafness has been found associated with affection of the superior temporal gyrus in the left hemisphere. Seppili[15] finds that of seventeen cases in which a post-mortem examination was made, in every one there was lesion of the superior temporo-sphenoidal convolution, and twelve in which also the second or middle convolution was involved.

Of twenty-five cases of word-deafness, of which I have

FIG. 21.

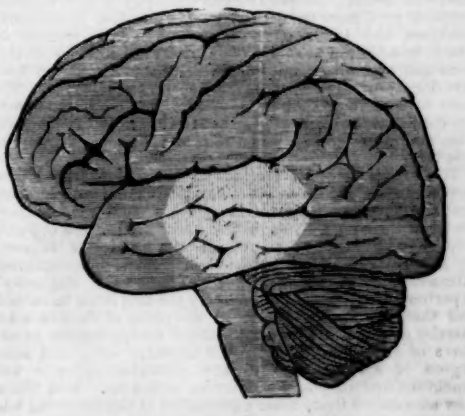
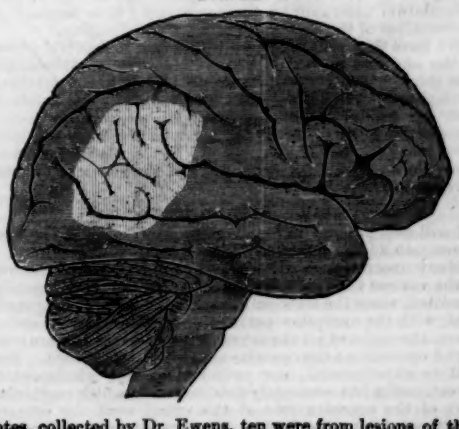


FIG. 22.



notes, collected by Dr. Ewens, ten were from lesions of the temporal lobe alone. In seven of these the first temporal gyrus was particularly affected; in the remaining three the exact limits of the lesion were not stated. Eight were from lesions implicating the angular as well as the upper temporal gyrus; six were from lesions invading the superior temporal gyrus and adjoining portions of the occipital or parietal lobes, and one was stated to have been due to lesion of the angular gyrus alone. In this case there appears to have been both word-blindness and word-deafness. In all, therefore, except one, there was obvious lesion of the superior temporal convolution.

Further confirmation of the localisation of the auditory centre in this convolution is afforded by cases of auditory discharges or subjective auditory sensations in connexion

[15] Revist. Speriment di Freniat, vol. x., 1884.

with irritative lesions implicating this gyrus. Gowers has reported two cases of this nature.[16] In the one a tumour, of which the oldest part was beneath the superior temporal convolution, caused convulsions commencing with an auditory aura referred to the opposite ear. In the other, a tumour affecting the superior temporal gyrus caused unilateral convulsions, preceded by a loud noise as of machinery. And Hughes Bennett[17] has reported several cases of auditory sensory discharges, followed by temporary loss of hearing in the opposite ear, or in both. Thus a woman subject to epileptic attacks preceded by a loud noise, like the ringing of a bell, in the left ear, became temporarily deaf in each ear after each attack. Both ears were deficient in hearing, but the left undoubtedly the more so. The superior gyrus has also been found atrophied in cases of long-standing deafness or congenital deaf-mutism. Thus Mills[18] records the case of a man who had been deaf for thirty years. The brain, otherwise normal, showed extensive atrophy of both superior temporal gyri, more particularly on the left side. Broadbent[19] describes the brain of a deaf and dumb woman in which, in addition to some defect of the annectent convolutions and supra-marginal lobule, there was atrophy of both superior temporal gyri, more marked on the left side. The facts of human pathology, therefore, undoubtedly support the view that the sense of hearing is localised in the temporal lobe, and more especially in the superior temporal gyrus of this lobe.

The experiments of Baginsky,[20] as well as the microscopical investigation of Flechsig and Bechterew,[21] indicate that the auditory nerve is in relation with the auditory centre of the cortex through the lower fillet of the opposite side, and thence by means of the posterior tubercle of the corpora quadrigemina and corpus geniculatum internum and the medullary fibres of the cortex. Baginsky's experiments consisted in destroying the labyrinth in rabbits and then tracing the course of the paths of degeneration thereby caused. He found a marked disappearance of the fibres of the lower fillet in the opposite side, and some degree of atrophy also in the posterior tubercle and brachium and corpus geniculatum internum. Von Monakow also states that, after extirpation of the temporal lobe in newborn rabbits, atrophy occurs in the corresponding medullary fibres of the internal capsule and in the corpus geniculatum internum of the same side; thus furnishing confirmation of the views of Baginsky and Flechsig.

We have thus grounds for believing that the central fibres of the auditory nerves do not, as Meynert has stated, all pass through the cerebellum on their way to the cerebral hemispheres—a hypothesis which is otherwise inconsistent with the results of destruction of the cerebellum itself. Some of the fibres of the eighth nerve undoubtedly pass into the cerebellum, but these appear to be the vestibular fibres from the semicircular canals, and not the cochlear or true nerve of hearing.

CENTRES OF TACTILE SENSIBILITY.

I will now proceed to consider the locality of the centres of common and tactile sensibility.

Many uncertainties still exist as to the paths and centres of the various forms of common sensation. It is universally admitted, since the classical experiments of Brown-Séquard, that, with the exception perhaps of the so-called muscular sense, the paths of all the other forms of sensibility are conveyed upwards on the opposite side of the spinal cord. But neither experimental, nor pathological, nor microscopical investigation has accurately determined in which particular part of the opposite side of the spinal cord the sensory tracts ascend to the brain. The experiments of Ludwig and Woroschiloff[22] appear to show that sensory impressions may be conveyed upwards, without any apparent disturbance of the normal relations, when the whole of the anterior and posterior columns, as well as the grey matter, has been severed; when, therefore, only the lateral columns of the cord remain intact. They found that, when only one lateral column remained, movements of the arms and anterior part of the body could be readily excited by irritation of the opposite leg behind the section, but only with difficulty by irritation of the leg on the same side. In order that impressions on the opposite leg should readily excite movements in the anterior part of the body, they found that that portion of the lateral column must remain intact which lies in the area bounded by the prolongation outwards of the anterior and posterior commissures—that is, the middle third. Ludwig and Woroschiloff were not able to differentiate the sensory from the motor tracts of the lateral columns, and concluded that both were more or less mingled together; but the facts of human and experimental pathology indicate that they are, to a large extent at least, distinctly separable from each other, and doubt may be entertained as to how far their experiments indicate the paths of true sensation as distinct from those of mere reflex reaction, more or less general. It does not appear that the paths of sensation proper degenerate upwards to any great extent after complete severance of the cord at any part. Of the paths which degenerate upwards, the principal are the posterior median columns, or columns of Goll, which degenerate upwards, in some measure at least, as far as the nuclei graciles or post-pyramidal nuclei of the medulla oblongata. The posterior external columns, or columns of Burdach, degenerate upwards at most for a distance of only a few roots. In addition, upward degeneration occurs in the direct cerebellar tracts, which can be traced continuously to the restiform bodies, and thence into the superior vermiform process of the cerebellum. Anterior to the direct cerebellar tract, but more or less distinct from it, there is another tract in which ascending degeneration is frequently observed, as was first pointed out by Gowers, a tract which, as Bechterew has shown,[23] differs in its period of development from the other tracts of the cord. This constitutes the antero-lateral column. None of these tracts, however, have been conclusively shown to be the path of any form of sensation proper, using this term to distinguish the paths of conscious from those of mere afferent or centripetal impressions.

As the direct cerebellar tract undoubtedly ends in the cerebellum, and, as the observations of Tooth[24] would seem to show, is mainly derived from the posterior roots of the upper dorsal and cervical regions, and not from those of the lower extremities, we may eliminate these from the paths of sensation proper. The antero-lateral tract in which Gowers is disposed to place the path of painful impressions, appears, from the researches of Tooth, to consist largely of very fine fibres, and to arise from the cells of Clarke's column. It ascends to the nucleus lateralis, which is the upward continuation of the lateral horn of the cervical cord, also called the visceral horn. The further course of this tract is uncertain, though its larger fibres are supposed by Tooth to ultimately reach the cerebellum. Gowers reports a case of unilateral lesion of the spinal cord[25] which would appear to support his hypothesis, and Bechterew states that analgesia follows transverse section of the anterior half of the cord. In neither of these observations, however, as Tooth remarks, can we eliminate affection of the grey matter itself.

I have lately performed an experiment on a monkey in which I divided the convex or outer half of the lateral column in the middle of the dorsal region. (Fig. 23.) Though a slight amount of paralysis occurred on the limb of the same side, there was no impairment of tactile or painful sensibility on the opposite leg the day after the lesion. The slightest touch on either limb immediately attracted the animal's attention. In another, in which I divided the greater portion of one half of the cord, excluding the posterior column, part of the anterior column, and that portion of the lateral column lying in the angle formed by the anterior and posterior cornua (Fig. 24), there was almost complete motor paralysis in the leg of the same side, but sensibility was not abolished on the opposite side. Whether sensation was at all impaired could not be determined with certainty, but the sense of pain was undoubtedly retained. These experiments are, therefore, opposed to the hypothesis that the antero-lateral tract is the path either of tactile or painful sensation.

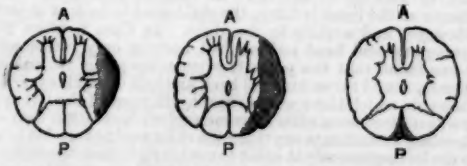
In another experiment which I performed on a monkey, the particulars of which I have elsewhere recorded,[26] I divided the whole of the left side of the cord with the exception of the anterior and posterior median column.

[16] Diseases of the Nervous System, vol. ii., p. 21.
[17] Sensory Cortical Discharges, THE LANCET, 1889.
[18] University Medical Magazine, Nov. 1889.
[19] Journal of Anatomy, 1870.
[20] Sitzungsber. Akad. d. Wissenschaften zu Berlin, 1886.
[21] Neurolog. Centralblatt, December, 1886.
[22] Der Verlauf Motorischen und Sensiblen Bahnen Durch das Lendenmark des Kaninchens, 1874.
[23] Neurolog. Centralblatt, 1885.
[24] Secondary Degeneration of the Spinal Cord, 1889.
[25] Clinical Society's Transactions, vol. xi., 1887.
[26] Hemisection of the Spinal Cord, Brain, vol. vii., p. 1.

Though the greater portion of the left posterior median column and the whole of the right posterior median column, as well as the grey matter on the right side and that surrounding the central canal on the left side, were intact, there was complete anæsthesia and analgesia on the opposite side of the body. This experiment, therefore, negatives the hypothesis that the posterior columns are the paths of tactile sensibility. It is also opposed to the hypothesis that the posterior median column is the path of the so-called muscular sense on the same side. For the behaviour of this animal indicated, so far at least as can be judged from the observation of the lower animals, that it had entirely lost muscular sense in the opposite limb; for while it was able to move its right leg volitionally in all directions, and for all purposes, without any appearance of uncertainty or ataxy, and could grip strongly with its foot, this was only when vision was free. When, however, the eyes were blindfolded the animal was utterly unable to extricate its leg from any opposition to its intended movements.

In another experiment I endeavoured accurately to divide the posterior median columns in the mid-dorsal region. The lesion was effected by plunging a triangular keratome into the posterior median fissure to such a depth—as I had calculated by repeated experiments on the dead spinal cord—as would divide the posterior median columns down to the posterior commissure. Though it seemed as if the whole of the columns should have been severed, I could not after death verify greater destruction than of the portions immediately adjoining the median fissure. (Fig. 25.) Though the animal was for a few hours somewhat weak or awkward in its hinder extremities next day, not the slightest impairment of tactile or muscular sense could be discovered. It ran about without any sign of ataxy, climbed with its customary freedom, clambered down the bars of its cage,

FIG. 23. FIG. 24. FIG. 25.



planted its feet with precision and without the aid of vision, and was at once aware when its feet reached the ground. The slightest touch on either foot, or on any portion of the lower part of its body, at once attracted its attention.

Bechterew has also found[27] that section of the posterior columns in the cervical region in dogs causes no loss of tactile or muscular sensibility, though the operations appear to be followed by disorders of equilibration. These, however, tended to disappear with the lapse of time. Bechterew's experiments, therefore, are opposed to the view that the posterior columns are the paths of any of the forms of sensation proper.

It has been stated by Brown-Séquard, and generally accepted by physiologists and pathologists, that the paths of the muscular sense do not cross with the other sensory tracts, but ascend in the cord on the same side; so that in hemisection or unilateral disease of the spinal cord the muscular sense is impaired or lost on the side of the lesion and retained on the opposite and otherwise anæsthetic limb. The facts of hemisection of the spinal cord in the monkey are, in my opinion, opposed to this hypothesis, but I am ready to admit that experiments on the lower animals, in which we can only infer as to the conditions of consciousness, are not so satisfactory in this relation as accurate observations on human beings. On investigation, however, of the cases which have been adduced in support of Brown-Séquard's contention, I find that the evidence of the retention of muscular sense in the otherwise anæsthetic limb, and its impairment or loss on the side of lesion, is far from satisfactory.

Out of forty-three cases[28] of apparently unilateral disease of the spinal cord, in which, however, there were only two post-mortem examinations, in only twenty-four was there any mention of the condition of the muscular sense in the original papers. In six the only evidence given of the muscular sense being retained was the ability to perceive strong pressure or the power of directing movements with precision; a condition, however, which has been proved to be possible in the entire absence of any sense of movement. In four the method of testing the muscular sense is not stated. In one muscular sense appeared to be normal on both sides, no further details being given. In another the only note was that the paralysed limb did not judge as exactly as the other side difference in weights. In three[29] the muscular sense was present on the otherwise anæsthetic side, but in these three tactile sensibility was not lost. In one case[30] muscular sense appeared to be lost on the paralysed leg; but in this case there was some anæsthesia of the arm on the same side, and probably, therefore, also on the leg. In one no investigation seems to have been made of the muscular sense while the limb was paralysed. Afterwards it was said to have a certain degree of incoördination and loss of motion of position. In another[31] the only note was that the patient retained the power of estimating weights and the consistency of bodies on the anæsthetic limb. The state of the other was not mentioned, and no exact details are given as to the condition of the various forms of sensibility. Of the remaining cases, in one muscular sense was lost on the anæsthetic side.[32] The condition of the other is not recorded. In another[33] the conditions varied according to the progress of the disease, but the muscular sense was always retained on the anæsthetic limb, so long as tactile sensibility and the power of localisation were unaffected. In the third[34] muscular sense was retained on the paralysed limb, though its condition in the otherwise anæsthetic limb was not mentioned. This was the only case which was followed by a post-mortem examination. In another, Köbner's case,[35] it was found, on applying proper tests to the paralysed limb, that the patient had a perfect knowledge of any movement passively communicated to it; and a similar case has been recorded by Jaccoud.[36] Though, therefore, there appear to be some facts in favour of Brown-Séquard's theory, others are absolutely opposed to it; so that clinical observation hitherto cannot be said to give unqualified support to the theory that the muscular sense remains unaffected when all the other forms of sensibility have been lost. Such being the state of the question, the particulars of the following case, which I have recently had under my observation, are of some importance.

W. S——, aged twenty-five, admitted as an out-patient at the National Hospital for the Paralysed and Epileptic on March 21st, 1890. Previous health had been good until three years ago, when he contracted syphilis. At Christmas, 1888, he observed that he had difficulty in emptying his bladder. Soon after this he had temporary paralysis of the sphincters, both of the bladder and rectum. In April, 1889, he complained of weakness of the left leg, which passed off after a few months, at the end of which time the right leg became affected, and has continued so, becoming more and more rigid up to the present date. On examination, there is tenderness to percussion from the tenth to the twelfth dorsal vertebra, and to a lesser extent for some distance above this point. The patient complains of constriction round the abdomen, just above the umbilicus. There are no abdominal or cremasteric reflexes on the left side, but both are present and well marked on the right. Condition of the limbs: The right leg is paretic and rigid. The knee-jerk is greatly exaggerated, and there is well-marked ankle-clonus. In this leg all varieties of sensation are normal. When his eyes are closed he can indicate with perfect accuracy every movement that is communicated to his limb. There is weakness of the left leg, and the knee-jerk is increased. There is no complete analgesia, but there is absolute tactile anæsthesia from the foot up to the knee, and dulled from this to the level of the umbilicus. Sensibility to heat and cold is very much impaired. With his eyes closed he is absolutely unable to say in what

[27] Neurolog. Centralblatt, February 1st, 1890.

[28] Most of these cases have been quoted by Brown-Séquard in the Archives de Physiologie, vols. i. and ii.

[29] Perroud: Journ. de Méd. de Lyons, vol. ix., 1868. Gilbert: Archives de Neurologie, tome iii., p. 275. Bayne: THE LANCET, vol. ii. 1885, p. 117.

[30] Brown-Séquard: THE LANCET, vol. ii. 1868, p. 689, Case 2.

[31] Dundas: Edin. Med. Journ., 1825, p. 304.

[32] Sir Charles Bell's case, Nervous System, p. 245.

[33] McKenzie's case, THE LANCET, vol. i. 1883, p. 905.

[34] Charcot and Gombault: Archiv. de Physiol., vol. v., p. 144.

[35] Archiv f. Klin. Med., 1877, p. 208.

[36] Leçons de Clin. Méd., 1867, p. 451.

position his limb or any part of his limb is placed, but he is able to direct its movements with fair precision.

In another case the patient suddenly became paralysed on the left leg, and anæsthetic in the right. This fact he discovered by the insensibility of the leg to hot water, which he could not bear with the right. At the date of my examination, a month after the attack, he had recovered from the motor paralysis of the left leg, but he was still absolutely insensible to thermal and painful stimuli on the right leg. Tactile sensibility was, however, equally good on both sides, and with it the muscular sense was also perfect in both. To my mind the evidence from the various facts mentioned is in favour of the view that the whole of the sensory paths pass up the opposite side of the spinal cord, and that they are not contained either in the posterior median column, or in the direct cerebellar tract, or in the antero-lateral tract; and, as the pyramidal tract may be entirely sclerosed without any affection of sensation, we are led by a process of exclusion to suppose that the sensory tracts ascend in immediate relation with the central grey matter. If the sensory tracts retain constant relation with the grey matter, this would account for their non-degeneration upwards like the other continuous afferent tracts of the cord.

ON HEAD-NODDING AND HEAD-JERKING IN CHILDREN, COMMONLY ASSOCIATED WITH NYSTAGMUS.

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(*Concluded from page 1350.*)

THE nystagmus may or may not be in the same direction as the head movements. An analysis of my cases gives the following result.

Pure nodding (one case); nystagmus vertical and very rapid.

Lateral movements of head (four cases).—In two there was occasional lateral nystagmus; one uniocular. In one there was vertical nystagmus of one eye only. In the remaining case the movements were different in direction in the two eyes; those of the right were vertical and very fine, those of the left more violent, and nearly horizontal (Case 3).

Combined nodding and lateral movements of the head (three cases).—In one the nystagmus was horizontal and mainly in the left eye; in one the nystagmus was lateral and rotatory, and mainly in the left eye; in one the movements were sometimes vertical, sometimes horizontal, and (?) sometimes rotatory, mainly in the left eye.

Movements sometimes nodding, sometimes lateral (two cases).—In one the nystagmus was said by the mother to be side to side, and very rapid; it was never seen by myself. In the other case there was no nystagmus, but the head movements were immediately preceded by lateral deviation of the eyes.

Lateral and rotatory movements of the head (one case).—Rapid lateral nystagmus of the right eye only, with some rotation.

It is convenient to mention here certain cases of nystagmus in infants, which are probably identical in essential points with the cases now under consideration. I put aside instances of albinism and all cases in which there is obvious defect of vision. I have already stated that nystagmus may be absent, and that the head movements may supervene even months after the nystagmus, or may be occasional and quite disproportionate.

The following case is not included in my series, although I am inclined to think that it represents an allied and possibly an identical condition:—

William H——, aged a year and ten months, was brought to me at the Hospital for Sick Children on July 9th, 1888. The mother had been married ten years. The patient was the fifth child, and was born at full term without any difficulty. The mother had had two stillborn children at the eight month. None of the children has had fits. There was no history of head injury. The child had been brought up on the bottle, and dentition did not begin until he was a year old. There was some beading at the junction of the ribs and cartilages, and the wrist-ends were thickened. The head was normal; the anterior fontanelle was not quite closed. The mother brought the child on account of some bronchitis following measles. I found accidentally that there was occasional lateral nystagmus with the right eye only, mainly when he fixed. The mother had noticed the movements for three or four months, and she told me that they became worse when the child was not well. There were no head movements. Six months later there was still occasional rapid horizontal nystagmus with the right eye only. The ordinary movements of both eyes were good, but there was said to be squint now and then. There had been no head movements and no fits. The child's general condition was good.

I will just call attention in Case 1 to the fact that there was vertical nystagmus of the eyelids as well as of the eyeballs. I know of no other instance of this association in this disorder.

In one of Henoch's cases, instead of nystagmus there was convergent strabismus of the right eye. Squint was said to have preceded the onset of the disorder in one of my patients, and the same is recorded in the second of Dr. Gee's cases. The ocular movements were examined in five of my patients, and in all were pronounced by Mr. Gunn to be unimpaired. The optic discs were examined in seven cases; in six they were normal; in one the fundi were very light-coloured, and there was a slight crescent of atrophy around the left disc. Special examination was made of the pupils in five cases. In one child (Case 2) there was a doubt if the pupils acted with convergence; in Case 4 the pupil of the nystagmic eye acted better consensually than with light. In another patient (just alluded to under optic discs as having light-coloured fundi) the pupils were active to light, but they also oscillated much independently of retinal stimulation (hippus). Hippus was also present in Gordon Norrie's case.

In some of my cases I noticed that the child had a peculiar way of looking at objects. In Case 3, during the subsidence of the head-jerking, the child used to look at objects sideways, and usually to the right. In Case 2, when the nystagmus and head-jerking had become only occasional, it was found that the patient, when attempting to look at objects, would throw his head back and half close his eyes. In Case 4, in which there was vertical nystagmus of the left eye, it was noticed soon after he came under observation that on directing attention to anything the child used to turn his head to the left, apparently in order to use his right (non-nystagmic) eye; this occurred long before the head movements made their appearance, and persisted after their disappearance. The mother always asserted that the child could not see with the left eye, but after several examinations Mr. Gunn was unable to detect any visual defect. In another instance the mother reported that the child had "a peculiar way of looking out of the corners of the eyes." In Case 5, again, during the recurrence of the nystagmus after the lapse of a year, the child used to throw his head to the right, so as to bring his left eye to bear on objects. It is very likely that these methods of regarding objects are related to visual defect, possibly dependent on the nystagmus in some instances.

In two patients certain seizures in which consciousness was temporarily in abeyance were seen by Mr. Gunn and myself. In Case 1 the attacks consisted in deviation of the eyes strongly to the left and downwards, the head also turning in the same direction, the pupils being (?) dilated. For the moment the child seemed to be quite unconscious. These attacks persisted for six months after the subsidence of the nystagmus and head-jerking. When last seen the child was cross and passionate, although previously she was remarkably good tempered. In Case 2 the eyes and head deviated strongly to the right, the face being directed downwards; at the same time the child looked vacant, and took no notice of what his eyes were fixed upon. In this patient also I thought the pupils became dilated. In this instance, as in the other, no change was noticed in the intelligence, but the child's manner became quiet and subdued.

In two other cases the mothers gave a history of momentary attacks of unconsciousness, but I had no opportunity of witnessing the seizures. The attacks mentioned in Dr. Gee's second case were probably of the same nature as in my patients. In a case which has recently come under my care, the child is said to lose consciousness for as long as a quarter of an hour. It is interesting to note that in none of my cases in which these seizures occurred was there a family or personal history of convulsions. In one patient, however, the mother gave an account of movements which may

or may not have been the so-called "salaam convulsion." To this I have already referred. In nearly all my cases I made inquiries bearing on the relation between this disorder and the convulsive state. In two instances there was a marked family history of convulsions. In the family of Case 3, four other children had been thus affected, and the patient, who was the subject of rickets, had several convulsive seizures during the subsidence of the head and eye movements. During the period over which the convulsions extended, the child had occasional outbursts of laughter, which were possibly allied to the convulsive state.[1]

The only other instance in which there was a marked history of infantile convulsions in the family was in the case of a female child, aged eight months, who had rhythmical lateral movements of the head and occasional horizontal nystagmus. The patient herself was free from rickets and had had no convulsions and none of the attacks of unconsciousness to which reference has been made. But two of the children in the family were said to have died in convulsions and another child, now alive, aged eight years, had suffered from convulsions in infancy. In four other instances in which special inquiry was made no family history of convulsions was obtained. It may be mentioned here that in Dr. Gee's second case, already alluded to, one of the children in the family had died of laryngismus. In Cases 4 and 5 attacks were described which were probably convulsive; but in neither was there a history of momentary unconsciousness occurring at intervals. I have referred to one case in which nystagmus was absent, but in which the movements of the head were preceded by lateral deviation of the eyes. Mr. Gunn, who saw these attacks, suggested an alliance with epilepsy. Taking a broad view of this question, I think there is evidence of an association between this affection and the epileptic state.

In one of my patients there was a very definite account by the mother of head-jerking and nystagmus in another child of the same family. This child, who subsequently died of bronchitis, was the third in a family of nine, and the history was that she had suffered, when about the patient's age, from movements of the head and eyes, occurring when a tooth was being cut. I have never had reason to believe that congenital syphilis has any influence in causation. Indeed, with the exception of two cases, in which there was a history respectively of snuffles and thrush, I discovered no evidence of syphilis. Conditions attending labour are also without effect. Out of seven cases in which details were obtained, delivery was natural in five, prolonged, but not otherwise abnormal, in two.

I may mention here that there is no special liability to head-jerking in either the earlier or later born children of a family.

The majority of my cases had been suckled, and there was no evidence that any faulty method of feeding had any determining influence. Out of eleven cases only two showed signs of rickets, and in neither was the condition extreme. In one, a child of eight months (Case 3), dentition had not begun; in the other, a child of eleven months, the lower central incisors only were present, and their appearance three months previously coincided with the onset of the head and eye movements.

In the majority of Henoch's cases[2] dentition figures as a frequent exciting agent. He clearly attaches considerable importance to this process, although he suggests the possible influence of other forms of reflex irritation. There is no doubt that head-jerking may appear or be aggravated when teething is active. With full mental reservation the disease may be described as an affection of the first dentition, but it is not essentially a disorder of dentition. There are various conditions which appear to have a predisposing or aggravating influence. For example, in one of my cases the jerking came on during whooping-cough; in another (Case 3) there was a relapse after measles, and in another aggravation of the movements during an attack of aphthous stomatitis. It is interesting to note that in nearly all my cases the general health was very good and the children remarkably good tempered; but the occurrence of any temporary debilitating condition had an aggravating effect on the movements. To revert to dentition, I may say that it is possible that this process, as Henoch believes, may be an important exciting agent. I have seen instances, however, in which it had no influence either in aggravating or in causing the movements. An argument, which in my mind has some weight against dentition as a cause, is the absence in most of my cases of the usual signs, local and general, of disturbed dentition. Head-jerking, moreover, may make its appearance at an age when teething is not active. In Case 1 nystagmus was noticed as early as six weeks after birth, the head movements supervening two weeks later. Dr. Gee mentions a case in which the affection was even earlier. Without attaching any undue importance to the fact, I may mention that occasionally teething is late and slow in head-jerking apart from rickets. The occurrence of head injury in three of my patients was striking. Cases 3, 4, and 5 certainly warrant the assumption that injury to the head is an occasional antecedent or aggravating agent. I obtained a history of falls in four other instances, but I satisfied myself that no causative influence could be attached to them. I must mention that of these seven cases in which falls occurred, four patients had the peculiar method of looking at objects to which I have alluded. It may be, therefore, that, in some cases at least, the falls were due to visual impairment or to vertigo. There was no history of falls in five cases. Without drawing any inference, which would not be justified from a few cases, I may state that eight of my patients were females and four males. The onset of the disorder was noted in all the patients. In one, already alluded to, the nystagmus occurred at six weeks, the head movements at two months. Of the other cases, the onset in one was noted between three and four months, in two at six months, in three between seven and nine months, in one at ten months, in one at twelve months, in two at fourteen months, and in one at sixteen months. In the majority of cases, then, the affection began between the ages of six and twelve months, and, after a perusal of other recorded cases, I should judge this to be the period of greatest liability. One of Henoch's patients, evidently exceptional, was three years of age. Most commonly the onset of the head movements and nystagmus are simultaneous; but this is by no means invariable. In Case 1 the head-jerking came on two weeks after the nystagmus, in Case 4 not until four months, and in Case 5 the movements of the head were only slight and occasional, and did not occur until a year after the first onset of the symptoms. In Case 3 the nystagmus did not appear until ten days. In a child eighteen months old, who had had nodding and lateral head movements for a year without a day's intermission, no nystagmus was ever seen. The head-jerking, however, was preceded by lateral deviation of the eyes (the case in which Mr. Gunn suggested an alliance to epilepsy). The course and duration of these cases of head-jerking are subject to variations. Sometimes the movements cease in a few weeks, but often there is a marked tendency to relapse under the influence of causes, to some of which reference has been made. The nystagmus usually persists longer than the head movements, and may recur even after an interval of several months. Case 2 was examined twenty-one months after he was first seen, and it was found that he was quite free from movements of any kind. In Case 4, on the other hand, the nystagmus was still present after a period of seventeen months. Of some of my cases I cannot speak definitely, as they are still under observation. In Dr. Gee's first case the child was found to be strong and healthy at the age of twelve. I have mentioned the occasional occurrence in a few instances of mental change, but I cannot say if this is likely to persist. Most of my cases were treated with bromide of potassium, sometimes combined with belladonna. Cod-liver oil, steel wine, and occasional remedies suggested by intestinal, bronchial, and other symptoms were also administered. In dealing with these cases the tendency to aggravation or relapse under the influence of various conditions should be borne in mind, and treatment adopted accordingly. My impression is that bromide of potassium has a beneficial effect in some instances.

It now remains for me to discuss the nature of these cases. On this subject Henoch remarks: "From an anatomical and physiological point of view, the frequent combination with nystagmus, less commonly with strabismus, is interesting. This combination has also been mentioned by other observers (Ebert and Demme), and seems to indicate that the root-nuclei of the spinal accessory and of the upper spinal nerves supplying the affected muscles of the throat and neck stand in a very close relation to those of the

[1] See Henoch, op. cit., p. 196, for reference to "convulsive laughter" in infants.
[2] Op. cit., pp. 192 to 194.

ocular nerves (oculo-motorius)."[3] Dr. Hughlings Jackson[4] has recently suggested that these cases are a variety of spinal or spinal-system chorea—a symptomatic condition allied to canine chorea. Whilst agreeing with the views of these two well-known observers, I believe the real nature of this affection may be further elucidated by an appeal to the evolution of purposive movements in the infant. The first acquired voluntary movements in the young child are those of the head and eyeballs. Although so early as six weeks a child will follow an object with his eyes, the movements at this time are imperfect and irregular. It is not until about the fourth month that the movements of the head and eyes become harmoniously associated, and for a considerable period subsequently ataxic movements may be seen when the head is moved voluntarily. In other words, here we have a purposive movement, which, although acquired in some measure at an early period, is not fixed. In the disorder which I have been considering I believe there is a dissolution, or rather disarrangement, of movement. In nearly all my cases the children were notably good-tempered, and their intelligence was probably above the average. I put aside those instances in which some change in the mental state was observed after the lapse of a considerable period. In a few cases it was found that the child took notice early. These observations were made before the interpretation which I suggest had occurred to me. If it be true that evolution in some of these children is more than usually rapid, it is likely that the movements of the head and eyes are precocious, and hence there is additional liability to dissolution. It is interesting to compare these head movements in children with the tremors of the head, which often occur in aged people.[5] I have, indeed, seen cases in adults which resemble very closely the head-nodding and head-jerking of children. Quite lately I observed in a woman of sixty lateral tremors of the head associated with occasional deviation from spasm of one sterno-mastoid. There was no nystagmus, and consciousness during deviation was unaltered. The occasional occurrence of deviation of the head and eyes with loss of consciousness recorded in some of my cases I believe to be of an epileptic nature. These seizures point to instability of motor centres above the nuclei in the spinal cord and fourth ventricle, presumably in the cerebral cortex.

P.S.—Quite recently Mr. Gunn kindly sent me two cases (sisters) which are highly interesting and suggestive. The younger, aged two years, was a very intelligent and good-tempered child, who was stated to have taken notice early. For a month before I saw the patient it was observed that she looked sideways when she wanted to look at anything. Mr. Gunn noted that the child generally kept the eyes to the right, but could look well to the left with good fixation. The head was held to the left, but was turned to the right to get central fixation. The pupils were equal and active to light; the optic discs were normal. With the ophthalmoscope slight nystagmus was seen. The mother said there were occasional lateral head-jerkings, but I myself never saw them. The child had a difficulty in picking up things (? in seeing them), and tended to fall when she tried to do so. There were several attacks in which consciousness was said to be lost. The elder sister, a very intelligent child, aged three years and a half, had double horizontal nystagmus, which had been noticed for six weeks. For several months it was said that she occasionally squinted when talking or when excited. No movements of the head had been observed. The pupils and optic discs were normal. Another child, an infant a few months old, was said by the mother to have movements of the eyes resembling those seen in the eldest child. Unfortunately, the mother failed to bring the child to see me, and I have been unable to ascertain the whereabouts of the family.

Welbeck-street, W.

[3] Op. cit., pp. 194, 195.

[4] Presidential Address on Ophthalmology and General Medicine: THE LANCET, Oct. 26th, 1889, p. 839.

[5] See remark by Dr. Herringham, Med. Soc. Proc., vol. xi., p. 362.

THE ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—The Prince of Wales has fixed Thursday, July 24th, for laying the foundation stone of the new building for the Royal South London Ophthalmic Hospital, on which occasion the Princess of Wales has consented to receive purses containing £5 5s. and upwards for the Royal Foundation Fund.

ON A

METHOD OF MAKING PLASTER SPLINTS, MORE ESPECIALLY FOR THE TREATMENT OF FRACTURES OF THE LEG.

BY ALEX. G. R. FOULERTON,

RESIDENT ASSISTANT SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

THE form of splint which I am about to describe has been found to be particularly convenient for dealing with such fractures of the leg as are suitable for the "immediate" method of treatment. Splints made on a similar principle may also be used for other purposes, which will be alluded to after their application to a fractured leg has been described. In the case of a fracture, say, at the junction of the middle and lowest thirds of the leg, three measurements are taken: (1) The length of the limb from an inch and a half above the knee to the sole of the foot; (2) the circumference of the thigh at the level of about an inch and a half above the knee; (3) the length of the foot from the heel to the ball of the big toe. An oblong piece of shrunk house-flannel or old blanket is then cut out, of such dimensions that it is one way an inch and a quarter longer than 1, the other way an inch and a half less than twice the measurement of 2. The limb is laid on the piece of flannel, which is then held up by its edges, supporting the leg as in a sling. Next, the flannel is tacked together with needle and thread close to the limb, down the front of the leg, along the sole, and then along the dorsum of the foot. It is better to sew the flannel up in the order given, along the sole first and along the dorsum afterwards, because by doing so the foot will be held by the flannel in the position in which it should be—at a right angle with the axis of the limb. The leg is thus closely encased in flannel, whilst along the front of the leg and dorsum and sole of foot a double free edge of flannel of greater or less extent is left beyond the seam. These free edges along the dorsum of the foot, as high as the ankle, and along the sole, are trimmed off close to the seam. There now remain two considerable wings of flannel extending down the front of the leg as far as the ankle. Each wing, when turned back from the middle line in front, will reach to within about half an inch of the middle line behind. These wings are then trimmed from below upwards, so as to shape them to the form of the leg. Two side splints with rectangular foot-pieces are then cut out of flannel, similar in shape to those used in a "Croft." They are cut out so that each piece, when applied to the limb, shall reach to within about a quarter of an inch of the middle lines in front and behind. Care must be taken that the anterior edge of each side-piece is quite straight; the posterior edge may be shaped so as to allow for the swelling of the calf muscles. Traction is then applied to the limb, and these side-pieces, having been thoroughly saturated with plaster-of-Paris solution, are placed over the flannel casing, one on each side of the leg. The wings of flannel are then quickly folded back, each over its respective side-piece, and smoothed down. Some plaster solution is then rubbed well into the outer surface of the two flannel wings, avoiding, however, a border about a quarter of an inch wide and extending down the front of the leg on either side of the seam. The perfect adaptation of the splint to the limbs may then be secured by applying a thin muslin roller bandage over the whole from the toes upwards. After ten minutes the muslin bandage is unrolled, and the splint is then finished. The plaster will probably be quite dry in the course of an hour or so. When the splint is completed it will be seen that next to the skin there is a continuous casing of flannel; that outside this there is on either side, except just below the ankle, a double thickness of plaster-saturated flannel; that along the middle line behind there is a sort of hinge formed by the single thickness of plaster-free flannel of the original casing, and that each anterior edge, when the splint is opened, is formed by a fold of soft flannel. This latter is of importance, as the skin is thereby protected from uncomfortable pressure of the anterior edges of the plaster saturated side pieces. Thus with these splints there is no tendency to the formation of superficial bullæ from this cause, nor will subsequent padding with cotton-wool be found necessary. A further small detail, which perhaps adds a little to the neatness of the splint, is to leave, when

trimming off the superfluous flannel along the dorsum of the foot, a narrow free margin of flannel which may be turned back on either side over the front edge of the plaster saturated foot-piece. After the splint is quite dry it can be easily opened, should it be thought desirable to have the leg available for future inspection, by running a pair of scissors down the seam along the front of the leg and the dorsum of the foot. The splint is afterwards held together by an ordinary roller bandage. In fact it is better in any case, even if the splint is not opened, to subsequently apply a roller bandage so as to hold the apparatus well together. When the splint is being prepared for a fracture just above the ankle-joint, a slight modification will ensure still greater strength where strength is most needed—that is, about the seat of fracture. In the splint just described, it has been noticed that just below the ankle there is only a single thickness of plaster-saturated flannel, as the lateral wings do not extend below this level. The desired increase in strength may be obtained as follows. The large oblong piece of flannel must in the first instance be cut an inch and a half longer than before. When the flannel has been sewn up, the superfluous free edges along the sole of the foot are trimmed off from the toes backwards, but only to within an inch and a half of the point of the heel. The remaining flannel being divided up the middle line behind as far as the end of the seam, two small side-pieces are formed which are turned upwards, each over its respective malleolus, after the plaster-saturated side-pieces have been applied. Plaster solution is rubbed well into them, the large wings are turned back, and the splint is completed as before.

I may, perhaps, be here allowed to briefly touch upon a few points on which my preference for this particular form of plaster splint is based. In the first place, this splint is undoubtedly stronger and more durable than either of the other two plaster splints with which I am practically familiar—that is to say, Croft's and the Bavarian,—from both of which details in the making of this splint have been borrowed. And this advantage is obtained without the expenditure of any more labour in the making, and without any appreciable addition to the weight of the appliance. In a simple fracture—of one bone, for instance—this increased durability and strength are of little moment. But in a compound fracture, when the splint has to be opened more or less frequently for the purpose of dressing, and in fractures of both bones, when a splint which will afford the strongest possible support is necessary, it is a consideration of some little importance to have a splint which will stand the unavoidable amount of handling and strain, and will last out in an efficient state until is support is no longer necessary. Thus in such cases, and with a weaker splint than mine, it is usually necessary before the end of treatment either to apply a fresh apparatus or to strengthen the old one. A collateral advantage of durability in such a splint is that after it has served its purpose in the treatment of a fracture it is still of further use. In hospital practice it is extremely convenient to always have a stock of old splints on hand which, after they have been used for a fracture, may, if still of sufficient strength, be cut down and utilised in the treatment of sprained ankles and similar casualties. Another point to be noticed is that the continuous casing of flannel next the skin forms an efficient protection against the pressure exercised by the hard anterior edges of the side-pieces on the skin; and thus, as I have already said, any tendency to the formation of pressure bullæ is absent. Then, again, with this method the amount of handling to which the fractured limb is subjected is reduced to a minimum; the splint can be easily applied with the help of one assistant to keep up extension, and with comfort both to the patient and to the surgeon.

Other purposes to which splints made on the principle that I have described may be put will now be briefly indicated. Excellent light splints for the knee or wrist in cases of arthritis may be made in a similar manner. In the case of the wrist-joint, a piece of flannel of an appropriate size is chosen. Its length should be such that it will reach from the distal extremity of the metacarpus to about three inches above the joint. This piece of flannel is folded lengthwise, and at the fold an oval aperture is made for the thumb. The flannel is then applied to the wrist, the thumb being inserted through the opening already made. The flannel is sewn together along the ulnar border of the wrist so as to encase the joint and leave two flaps, one to be turned back over the palm, the other over the dorsal aspect. Two small oblong slips of flannel are then cut out and saturated with plaster solution; one is applied to the back, the other to the front of the flannel casing. Over these pieces the two wings are turned back from the seam. Some plaster solution is then rubbed in, avoiding a narrow border along the seam and along the radial border of the wrist. A turn or two of the muslin bandage is then applied for five minutes or so. When, with an improved condition of the joint, the splint becomes loose, or, if dressings have to be applied, the seam is slit up and the splint tightened up with a roller bandage. For the knee the method of application is sufficiently obvious, and requires no further notice. So, too, convenient and close-fitting splints may be made for the elbow, whether for recent injury about the joint, for chronic disease, or for support after operation. By this method the splint may be shaped on the joint, the latter being kept at any angle which may be thought desirable. It will usually be more convenient to have the seam along the front rather than the back of the arm; the side-pieces will have to be cut so as to correspond with the angle at which the joint is to be kept.

In conclusion, I will add that so far as fractures of the leg are concerned I have purposely avoided all allusion to the class of fractures suitable for "immediate" treatment with this or any other form of splint. Some surgeons will limit it to simple fractures of one bone, others will extend it to compound fractures of the utmost severity. The conditions under which the patient has to be treated, his age, and in hospital practice the number of beds available for such cases, will all have their bearing on the matter. I am now merely suggesting that, given a fracture which the surgeon judges to be suitable for treatment by the "immediate" method, the particular form of splint which I have here described is one which presents certain advantages.

NOTE ON THE

MORPHOLOGY OF THE CHOLERA COMMA BACILLUS.

BY G. F. DOWDESWELL, M.A., F.L.S., &c.

WHATEVER may be the relations of this microbe to the disease in which it occurs, its morphological characters are unquestionably most remarkable. It was some time after its notable discovery in cases of cholera by Dr. R. Koch that the significance of the so-termed "commas" was generally recognised; that they were, in fact, but segments of a spirillum. The term "comma" in its English guise is not a happy one, but it has been overlooked, that, as I pointed out before,[1] the term was not new, but had been used by Messrs. Ewart and Geddes[2] in their account of the "Life History of Spirillum." In 1884, in the Proceedings, Royal Society, and in the following year in greater detail, in the *Practitioner*, Dr. E. Klein described and figured phases of this microbe where it formed round cells "spheroidal or discoid and vacuolated," which, as he wrote, "represent the initial stage of a mode of division different from the ordinary mode of transverse division." The appearances here described by Dr. Klein were received on the Continent with somewhat superficial criticism; in this country they were studiously overlooked or misunderstood by those who wrote upon the subject.[3] It is obvious that these appearances represent developmental characters quite unprecedented amongst the schizophyta, and, admitting the generally received opinion that the cholera microbe belongs truly to this group, are altogether anomalous. I had an opportunity in 1884 and 1885 of observing the appearances obtained and described by Dr. Klein, both in fresh cultures and in permanent stained preparations which he gave me, but was unable myself at the time and for long subsequently to reproduce these forms in cultures from different sources. In January, 1889, however, I received from M. Ed. de Freudenreich, Director of the Bacteriological Department

[1] Journal of the Royal Microscopical Society, 1885, p. 953.
[2] Proceedings of the Royal Society, xxvii. (1878), p. 434.
[3] As, quite recently, by the writer of a somewhat invidious notice in *Nature* (1890, p. 509), who asserts "that little if anything has been added to our knowledge of the mode of growth, its reaction to dyes, or its life history" of the comma bacillus, "since the account which Koch gave of it in 1884."

of the Agricultural Institute, Rutti (Berne), cultures of the microbe in its ordinary or comma form which came from a source in the south of France; the first sub-cultures from this produced similar forms, but subsequently both the cultural characters and the forms of the microbes that developed showed some variations, and were similar to those mentioned below. In June, 1889, Dr. E. Klein gave me another culture of this microbe, the source of which was from India. In subcultures from it I obtained the appearances confirming those I had previously observed, and which I here briefly describe. When from these cultures in nutrient gelatine, after a considerable, but apparently variable and uncertain time and number of removes from the original source, bouillon peptone is inoculated and kept at the temperature of 37° C., a growth develops in from some hours up to two or three days or more, and the fluid becomes turbid. On examination under the microscope, small roundish cysts or coccoid bodies are observed, some of which are in active movement. There are also found small masses composed sometimes of minute granules or corpuscles, and sometimes of short fine filaments, or partly of both. Some of these masses have a distinct gyrating and progressive movement, sometimes tolerably rapid. Minute detached bacterioid or vibrioid particles may also be seen, but very small and of rather indeterminate form. The coccoid cells and cysts are variable in size from two or three up to five or six mikrons or more in diameter. Soon there appear amœboid forms, often in active movement; they are flagellated, and some at least are ciliated; they do not fuse together to form plasmodia, like the mycetozoa, nor, as far as I have observed, do they usually conjugate; but I have observed clearly in one case at least (in, of course, a cell culture on the warm stage), that two of these corpuscles, both actively spinning about, the one pear-shaped the other round, approached one another and became not fused or conjugated in the usual manner but united by a short filament, which was distinctly perceptible by a little management of the illumination. This was exactly analogous to what Dr. Dallinger has described and figured in the case of the infusorian monads: the two bodies remained dancing about together as long as I could keep them in sight. The size of these cells varies in length from the very minute up to nine or ten mikrons or more; they are frequently vacuolated, but I have observed no nucleus. A very common form is that of a pear or flask, and I have frequently observed a tendency to bilateral pseudopodial processes, which for some time are persistent, but their forms, in fact, are protean.

After some time, often within ten hours of inoculation in tubes, the active round cells and the amœboid alike become quiescent, and vacuoles appear; the outline, too, becomes hard. This appears to be the encysted or resting stage; in some few, two or three short filaments or cilia are still apparent. Within twenty hours all these cysts have collected into masses, are quiescent, and disintegration has commenced. In cell cultures they mostly collect near the margin towards the groove of the cell for the sake of aeration. They then break quickly up, when examined under the microscope from a tube of bouillon culture, but in the undisturbed conditions of a closed culture cell more slowly, and they form what appear to be masses of minute granules, with some débris—filamentous or flocculent matter—amongst them, and some minute bacterioid or quasi-comma forms, but these, as far as I have been able to observe in cell cultures appear to be altogether effete, and not viable; it is the sporules only that are reproductive. These I have watched over and over again under the microscope develop into the forms described, and at the same time I have as often proved the absence of contaminations by plate cultures, after a modified method on the surface of solid nutrient media, in plugged tubes. The cell wall, too, breaks up into segments, which at first, for some hours, might be taken to represent the "commas" of the original cultures; but these segments, too, very shortly break up into small particles. These, together with those formed from the plasma of the cell, are found to be minute spherical corpuscles, two to three mikrons in diameter. They stain rather badly with any of the usual aniline dyes. The quiescent cysts may, I think, properly be termed "sporangia," and the corpuscles they form "sporules." This concludes the first cycle of transformations or alternation of generations in my observations. Sometimes, however, this succession of forms shows slight variations, speaking always of cultures of about the same distance in time from the original source. When inoculations in bouillon are made either from the same stock culture in gelatine, or the subculture in bouillon that has formed sporules as just described, instead of the round mobile cells first appearing, active amœbæ are at once developed, which then form the round resting cells and sporules as above described; or, again, under similar conditions, and this most frequently, no amœboid forms at all appear, but only round cells—first active and then quiescent. In cultures of a later date—in my case after some months; i.e., removed by that length from the original source—I have, again, observed another generation or cycle of transformations; if from a subculture of this date tubes of bouillon peptone or culture cells at 37° C. be inoculated, within generally about five hours active development is observed, by the macroscopical appearance of the tubes or in the culture cells under the microscope. In this case there are formed filamentous masses of very varying size; the smaller of these are usually in active whirling and progressive motion. From the edges of these small masses sometimes a minute vibrio-like filament is detached and spins out of the field of view; but this is not frequent. I have, however, observed something of the kind previously, with cultures of the normal commas. The usual development of the large masses, which I have kept continuously on the warm stage under the microscope during the whole cycle of evolutions, is to steadily increase in size, forming masses of convoluted filaments, with, round the edges, a few of them in slight undulating motion but without becoming detached, and, within twenty-four hours of inoculation, to break up into sporules, spherical corpuscles precisely similar, as far as I can see, to those of the former cycle. With these their development ends. There also occur the small transient bacterioid or comma-like filaments before-mentioned. In this "generation," too, I have observed a variation, not unfrequent, but apparently arbitrary. In these cases, together with the masses of filaments, there appear bacillar cells, but of vastly greater thickness than the filaments. They are fully one mikron wide. Some are short and united in chains of a few cells, some are longer and more leptothrix-like, others are spirillar, and move with a sluggish rolling or rotatory movement; but they all appear to split up very shortly into small corpuscles, which I have not been able to distinguish from those of the filaments. This completes the second cycle, or generation. Naturally, with these and other appearances observed, the first thought was that they were due to contaminations, but repeated and continuous observation on the warm stage and frequent separations showed that this was not so.

The appearances I have here described I have observed both in cultures in tubes of bouillon in the incubator, examined in the natural state—that is, undried,—and in closed cells on the warm stage under the microscope, which is the only method, as it seems to me, to give reliable results on the morphology of the lower organisms, in the first instance at least. Without these I certainly should have missed some of the stages of these transformations, they occur so rapidly and are so evanescent. In watching the development of spores under the microscope, the first changes are frequently apparent within an hour and a half or even less, both in the formation of round cells, of those of amœboid form, or of leptothrix filaments. This latter process is very remarkable. The spores at first commence to arrange themselves in linear order, they then elongate, forming the cells of the leptothrix filaments in sinuous or convoluted lines. In one instance I watched continuously a small mass of thirteen spores, which formed a slight twisted coil of the same minute cells, which elongated, formed short filaments, and again broke up.

In stained cover-glass preparations made by different methods some further points are apparent; the cells of the filaments, in masses large or small, are seen to actually coalesce or be fused together, as if they were evolved out of a mass of primitive plasma. This cannot be distinguished in cell cultures or unstained preparations; at least I cannot do so. This appearance does not arise from heating the preparation, as when made by other methods without heat or desiccation the same thing is seen. Again, in natural or unstained preparations it is somewhat difficult to distinguish the exact form of the sporules formed from the plasma of the round cells or the filaments, but in a successful cover-glass preparation they are seen, as I have described, to be minute round corpuscles. Here, again, there is a variation only seen in these stained preparations. In some few cases, where from the stage of masses of filaments they become separated and broken up, there are seen small groups of a

few cells somewhat different from the general form of the filaments. They are short, bacillar, and appreciably thicker than the latter. Some few are slightly curved, not unlike the typical commas, but distinctly larger. They are not, however, as thick, nor do they appear as long as the large bacillar forms previously mentioned.

It was originally stated by Dr. Koch, and has been generally acknowledged, that the most distinctive character of the comma bacillus is its cultural habits: one of the earliest and most readily apparent indications of the transformations I have described is a slight change in this habit; in cultures on gelatine with what I have termed the second and third generations or first and second cycles of transformations, instead of developing at 15° C. in the traditional manner within twenty-four hours, they develop slowly and with difficulty, only showing any growth after some or several days. In one case now before me, nearly four months old, the gelatine is not yet wholly liquefied. On the surface of the agar-agar at 37° C. they develop sparingly; in the cold apparently not at all; and in bouillon at 15° C., only after two or three days. In cultures of the first cycle of transformation in bouillon at 37° C. I have frequently found distinct turbidity occur within an hour and a half of inoculation; this, with the methods I have employed—viz., ten to fifteen centimetres of bouillon inoculated with a small droplet, less than 0·01 centimetre—from a capillary tube, of an active growth, implies a development of upwards of a thousandfold within 120 minutes, which is more rapid than anything I have observed with any other microbes,[4] and shows the occurrence of fission within every ten minutes. In the case of this rapid development, the forms, when examined on their first occurrence under the microscope, are always the small, round, active cells which follow the course of development already described. It is, however, only when inoculations are made from the sporules that this occurs. In the case here referred to, of the first cycle, the turbidity of the fluid is equable throughout—that is, no flecks or particles are apparent. In the case of cultures of the second cycle, development in the tubes becomes apparent generally in about five hours, as I have mentioned; but in this case there are apparent in the culture fluid minute flecks of particulate matter; under the microscope these are found to be the masses of fine filaments I have described above.

The phases of development here described are mainly the result of continuous observation upon cell cultures on the warm stage of the microscope; the mode of development in tube cultures in the incubator agree with these as far as can be seen by discontinuous examination. The cells used, which I have employed for several years, I have previously described, but have lately found that they are identically the same as those known as "Ranvier's moist chamber."[5] They possess the great advantage of every part of their contents being accessible to examination with the highest powers, and also show very plainly the aerobic tendency or the reverse of the organisms enclosed, according as they seek the periphery of the cell or not. In these cell cultures, too, the growth of any contamination is at once apparent. As it happens, however, in the locality in the country where these observations were made, the atmosphere is almost absolutely free from any form of the schizophyta, though teeming with various "moulds," the development of which, if it occurs, is very readily distinguishable. I have termed the corpuscles developed from the sporangia "sporules," to which, I think, they are clearly equivalent, and have frequently watched their germination in cell culture. They stand partial desiccation better than the original commas do, and in a culture fluid, even as partially dried scum or pellicle on the side of the tube, they retain their viability for about five months, but not for more than six. In stained preparations of the filaments some may be seen with deeply coloured corpuscles at intervals throughout their length, the plasma of the cell between them shrinking and obviously degenerating. Some have a corpuscle at one or both ends. Similar appearances have been described and seen by myself in the case of the typical "commas;" here, however, I think clearly the corpuscle is not "swollen"—i.e., it is not larger than the original width of the cell, but the cell itself, both plasma and cell wall, if there is any such (of which I am not sure), is shrunken, and rapidly disintegrating. Within a few hours nothing remains of it, but it must be remembered that the whole arrangement is very minute, distinctly under half a mikron. I think these corpuscles are properly termed spores, though not equivalent to the resting spores of bacilli.

What relations the sporangia, or round resting cells above described, have to the circles of Dr. Klein I am uncertain. I do not think they are altogether equivalent—i.e., probably they represent a developmental state of another cycle, or generation; but of this I am not sure. They certainly do not break up into the commas, or semicircles, described by Dr. Klein, and from the observation of them in the natural state they are evidently spherical, and not discoidal. The phase of development I have observed most recently, and which occurred pretty constantly, has been that of active round cells, with only a slight tendency to become amæboid, similar to the first cycle I have described. With these there occur minute, very active bodies, of a short, filamentous, irregular form, somewhat difficult to determine exactly. Watching these on the warm stage it appears to me that fertilisation occurs. The smaller bodies, which must be regarded as zoöspores, whirling rapidly about, approach the round cells, the oöspores, and remain in contact with them, the latter becoming quiescent. They then break up into the sporules, before described, the whole course of development only occupying a few hours. As in other phases, some evanescent comma-like forms are developed, together with the sporules. It would be impossible to observe these changes excepting on the warm stage. What the significance of the fugitive large bacillar forms above-mentioned is it is difficult to say. As I recorded,[6] there occur normally in the intestine of guinea-pigs large, curved bacillar bodies. These, I stated, were much larger than the typical commas, and could not be confounded with them, though apparently fungoid." Then Mr. Watson Cheyne, in a paper published immediately afterwards, and which, indeed, must have been in the press on the appearance of mine, described and figured some "large worm-like bodies" in the same situation in guinea-pigs that had been experimented upon, though he mistook them for pathognomonic. Dr. Klein afterwards confirmed my observations on this subject, though without noticing them. These bodies are of very variable size and strange contorted form; they are so unlike the normal commas that at the time (1884–85) I thought it impossible that there could be any genetic connexion between them. The forms I have above referred to remind me forcibly of them, and it is possible that they may be related. Mr. Cheyne stated that he knew of their relation by cultivation. Neither I, nor, I believe, others have succeeded in cultivating them from the intestine of the guinea-pig, and the difficulty of doing so may possibly proceed from the indisposition of the microbes in the cycles I have described to develop on the surface of gelatine or agar-agar.

What is now known as the "pleomorphism of the bacteria" was first demonstrated and established by the late Dr. Davaine many years ago, as is, or should be, known to every student of the subject. He showed that in the case of bacterium termo by inoculating it into the tissues of different plants bacillar, leptothrix, or corpuscular-coccoid form could be produced and changed at will, and that consequently the classification of Ehrenberg, which divided the bacteria into genera characterised by their showing these forms, could not be relied on. Davaine in these experiments anticipated the exact methods of modern micro-biology established by Dr. Koch, as he did in other instances; for although the methods of obtaining pure cultures by plate separation were not then promulgated, yet he adopted the equivalent of one of the alternative methods of obtaining these advocated by Koch[7]—viz., by inoculation (not, indeed, into the living animal, but into the vegetable organism)—and it is now a well-recognised maxim that without pure cultures no conclusions on this subject can be established.

This "pleomorphism" of the schizophyta is generally regarded as applying only to variations of form which have been recognised as occurring normally in or characteristic of the different genera. It is quite obvious that in the various forms I have indicated we have a very different thing. It appears to me that we must regard these transformations as implying an alternation or alternations of generations. We have *A*, the so-termed commas and spirilla, whether or

[4] This rapidity of development, though unprecedented amongst the schizophyta, is not, however, comparable to what has been described in some fungi.

[5] Described and figured in the recently published translation of Jörgensen's work, the Micro-organisms of Fermentation.

[6] Brit. Med. Journ., March 21st, 1885.

[7] Wundinfections Krankheiten, English translation, pp. 68, 69.

not ending in sporules. This occurs for an indefinite number of generations; next, *B*, round ciliated active cells, and irregularly active amœboid forms; then round resting cells (sporangia), ending with minute sporules. In the third generation we have from sporules active motile filaments, with the variation of large fugitive bacillar (? worm-like or spirillar) forms; these all alike terminate in sporules similar to those of the former generation. Again we have, as I have witnessed within the last few days, the second generation, *B*, succeeding or alternating with *C*, though it presents some variations. I have not succeeded by any methods I have yet tried in reproducing the normal commas, viable and reproductive *per se*. Comma forms do indeed occur amongst the different forms described, as I have above mentioned, and in dried and stained cover-glass preparations perhaps no difference from the original typical commas might be apparent. It is almost entirely upon cell cultures and natural—i.e., living preparations from tube cultures that I have made my observations.

As is well known, Dr. Ferran has described some singular variations of form with "conidia" in cultures of the cholera microbe, and Dr. van Ermengem[8] independently confirmed his statements, described and figured his results. I have followed the particular methods described by these authors, but without success. I do not, however, on that account, as has been commonly done, doubt the accuracy of their statements, or ascribe them—too common a method of perfunctory criticism—to contaminations, with at least a skilled observer like Dr. van Ermengem. I have reason to believe that Dr. Klein and others have lately observed somewhat similar transformations to those I have described; how far their observations may agree with my own I do not know, but it would not surprise me if they had obtained forms widely different again. It is difficult to know to what class or even kingdom we are to assign these organisms. From their small size and the fugitive occurrence of the amœboid forms, I have not been able to pursue experiments to determine whether they belong to the animal or vegetable kingdom. It is possible that they may be allied to the imperfectly known sporozoa. It is, however, clear either that this microbe is not one of the normal schizophyta, or if it be, then, as has been conjectured by some of the earlier writers on bacteria, that they do not represent an independent group, but are merely evolutional phases of some higher organisms, or perhaps only *organs* of other organisms.

I have shown above that the transformations are not only morphological, but physiological also, and it is not inconceivable that this may have some pathogenic significance. There is no occasion here to discuss the result of previous observations and statements as to the relations of this microbe to disease, that has been done by Dr. Klein in his last work,[9] in a manner as logically clear, temperate, and candid, as conclusive to all unprejudiced persons; but to his exposition I will add one word from my own observations. In the experiments I made with the cultures I had obtained in 1884, briefly recorded in the *British Medical Journal* as above mentioned, I found that by injecting large quantities of the cultures subcutaneously into guinea-pigs what I at first regarded as choleraic symptoms were produced, but I quickly found, by examination of the rectal temperature, that it was septicæmia or sapræmia that was produced, and not cholera, the temperature rising at first rapidly and then falling gradually, instead of, as in cholera, falling steadily and progressively without any initial rise; the curve of temperature was, in fact, precisely similar to that first described by the late Dr. Panum in his well-known observations on septic intoxication, and which I repeated many years ago, without, however, publishing them, as I had nothing to add to his conclusions. It is a remarkable fact that neither MM. Nicati and Rietsch, Dr. Koch, nor those who have repeated their experiments have given any notice whatever of the course of the temperature, a symptom which is at once conclusive of the distinction between cholera and sapræmia.

Our knowledge of bacteriology has suffered from so very few professed naturalists having worked at or given any attention to it. On the Continent they are few enough, in this country none at all. It is obviously desirable that systematic mycologists should give their attention to the transformations of this organism, with a view to determining its position and affinities. The observations in closed cells on the warm stage under the microscope are perfectly easy and satisfactory, nor do they necessitate the use of high powers. I must add, both in justice to the maker and for the information of other observers, that the objective I have used almost entirely is a dry $\frac{1}{4}$" by Messrs. Swift of Tottenham-court-road. I have had the glass several years, and latterly have used it almost exclusively in observations upon microbes. Its price was extremely moderate, and its optical qualities in every respect excellent, putting to shame many objectives of much higher pretention and cost; being dry and not immersion is a great advantage, while it is so good and light, that it stands very deep eye-pieces, giving, if necessary, an amplification of fully 1000 diameters. Excepting for micrometry higher powers are almost superfluous. I must, however, add that I by no means intend to disparage the lenses of other makers. Doubtless there are many that are excellent, as, e.g., two, a $\frac{1}{4}$" and $\frac{1}{8}$", both dry, by Messrs. Beck and Co., of Cornhill, of exceedingly moderate price, and of which the optical qualities are excellent, whilst the admirable productions of Dr. Zeiss of Jena are too well known to need commendation. I record this more particularly for the information of those who may not be familiar with the use of the high powers of costly price so much vaunted now by some, and whom the fancied necessity for the use of them might deter from examining this subject. The conditions which determine these transformations are very obscure. They appear only to occur in cultures that are removed from the original source by a considerable length of time. The temperature influences them in the rapidity with which they are completed; the composition of the culture medium affects them very greatly. Very remarkably, I have found latterly that the forms here described will not develop at all at any temperature in bouillon (with peptone and NaCl as usual) unless of a high degree of concentration of fully sp. gr. 1008 (the plain bouillon)—that is, more in accordance with the formula of Dr. Koch than that of Dr. Miguel, which for the majority of microbes I have found preferable.

I have here only described a portion of the appearances I have observed. The amœboid forms, various and grotesque as they are, are generally difficult to preserve; but I have photographs of some of them, admirably taken by Mr. Andrew Pringle, which hereafter I may publish with further particulars. Anomalous as such transformations are amongst the schizophyta, they are nothing either in variety or the rapidity with which they are completed to what has been observed and perfectly well established amongst micro-fungi. I feel confident that the phases I have described will be confirmed and perhaps widely extended by others, if they well observe the development of this organism on the warm stage in the manner I have done.

P.S.—Further examination of the characters of the sporozoa has confirmed the opinion I have above expressed, that the microbe here described probably belongs to that class. In Balbiani's "Leçons sur les Protozoaires" (Paris, 1884) I find forms described and figured which strongly resemble some phases of the cholera microbe which I have cultivated and of which I have drawings, especially is this the case with what Balbiani figures as the "Macrospores of the Monocystis of the Earthworm."[10] These are in form almost exactly like a phase which I have found very frequent and characteristic.

On May 22nd last Dr. E. Klein described to the Royal Society, and showed photographs of, a developmental form of the bacillus tuberculosis, which was apparently truly branched, and therefore clearly could not belong to the schizophyta, but appeared to be a mycelial fungus. Owing, however, to the restrictions of the Society I was unable to obtain a print of his paper, and consequently can offer no further opinion upon it; but the circumstance seems clearly to support the view that some at least of the so termed schizophyta are but developmental forms or transitory phases of higher organisms. Other circumstances, too, support this view with regard to some of the a-sporous species. During the summer months bacterium termo is proverbially ubiquitous, with other species, any resting form of it is not known; in an exhausted culture it dies out in a few weeks, and somewhat more quickly if desiccated; during the winter it disappears entirely, as I have found in two successive years, and cannot then be reproduced by any cultural methods, but it reappears everywhere again in the summer. The only intelligible explanation of this is that

[8] Sur le Microbe du Choléra, Bruxelles, 1885.
[9] The Bacteria in Asiatic Cholera, London, 1889.
[10] Op. cit., pl. 2, figs. 1 and 2.

the bacterium is only a developmental and transitory phase of some other organism, though the latter has not yet appeared in artificial cultures. It is not, however, necessary to suppose that this is the case with all forms or species of the schizophyta; on the contrary, the sporiferous species in all probability form an independent group, and we may know the whole cycle of their developmental history. I would, however, protest most strongly against a tendency that has been shown by some writers to include in the same group sporiferous and a-sporous species, the bacteria and the bacilli, on account of the most superficial resemblance in form, thereby violating the accepted principle of the modern classification of the thallophytes—viz., according to the characters of their reproduction, which is recognised by the highest authorities on this subject both on the Continent and in this country.

Finally, I would emphasise what I have said above, that the forms of this microbe, some of which I have very briefly described, or those of any similar organism, can only be properly observed in suitable culture chambers. In the words of Maupas,[11] "Il faut d'abord et avant tout se pourvoir de chambres humides convénablement disposées."

CASE OF CÆSAREAN SECTION FOR OSTEO-MALACIC PELVIS.

By WILLIAM McGOWAN, M.D.,
MEDICAL OFFICER, MAGHERA DISPENSARY, CO. DERRY.

On Dec. 4th, 1889, I was called upon to attend in labour I. McC——, the wife of a farm labourer. I saw her at her residence, about two miles distant, at 7.30 A.M. The patient, aged thirty-seven, a small, delicate, emaciated woman, was the mother of five children, and all her previous labours had been natural and easy. I myself attended her at her last confinement, on Aug. 17th, 1881, when the pelvis was quite natural and roomy, and she had an easy labour, not even the forceps being required. After this I lost sight of her, but there was the history of her having, immediately following this confinement, to keep her bed for over six months from what was called "rheumatic pains." For some six months or so more she was only able to be carried to a chair at the fire. After this she began to go about a little on crutches, and gradually gained strength, but remained permanently "bent in the back," "sunk," and "stooped." During the latter months of gestation she said her health had been very bad, and scarcely anything was retained on the stomach, so that she was very weak. When I saw her she had been about forty-two hours in labour, and yet, as she said, "it was doing no good; the lump had not gone down as it used to do." Examination revealed an extreme degree of pelvic contraction and deformity. The tubera ischia were less than three-quarters of an inch apart, almost obliterating the pubic arch; so closely approximated were they that the index finger could only with some difficulty pass between them. The sacrum and coccyx projected forwards, leaving only a narrow chink between them and the approximated ischia. For want of space, caused by this narrowing of the outlet, it was impossible to make out the presentation.

As delivery by the natural passage seemed impossible, I sent for my friend, Dr. Thompson of Bellaghy, who arrived shortly after 10 o'clock. On examining her, he agreed with me that the only chance of delivery must be by the Cæsarean section. The nature and dangers of the operation were explained, and, the sanction of the patient and her husband having been unhesitatingly obtained, we determined to lose no time in carrying out the operation, as the powers of nature were already greatly exhausted by the prolonged labour. Giving directions to have the house thoroughly heated and other preparations made, I returned home for the necessary instruments &c., and proceeded again to the house at 12 o'clock, accompanied by Dr. Thompson and Dr. Hueston, of Maghera, who kindly afforded me their valuable advice and assistance. The patient was lying in the kitchen of a farm labourer's cottage, so that the surroundings were not favourable for a serious operation. However, there was no alternative. The rectum was well cleared out by an enema, a catheter passed, and the patient placed on a suitable table and put under the influence of chloroform. With the strictest antiseptic precautions possible under the circumstances the usual incision was made, and without any difficulty I speedily removed a living child, healthy and fairly well developed. In making the incision in the uterine wall I came on the placenta attached to the anterior surface. This I cut through, and the child and placenta were removed without any trouble from hæmorrhage. Owing probably to exhaustion caused by the prolonged labour the uterus did not contract well. After ascertaining that the passage to the vagina was patent, the uterus was sutured by chromicised catgut passed deeply into the tissue. The peritoneal cavity was sponged out, and the wound in the abdominal wall secured by six silk sutures passed deeply so as to include the whole thickness of the wall and peritoneum, and superficial ones through the skin between these. The wound was dusted with iodoform, covered with wood wool, and secured by four broad strips of adhesive plaster and a flannel binder over all. The external genitals were covered with carbolised tow and cotton wool. During the suturing of the external wound vomiting set in from the chloroform, but it soon ceased, and the patient was put to bed with a pulse, though weak, as good as before the operation. A hot-water jar was put to her feet, her head covered with flannel, and a hypodermic injection of morphia given. In the evening I found her in a satisfactory condition, but retching and vomiting at intervals. Ordered nothing to be given by the mouth except small quantities of brandy and iced soda-water. Passed the catheter.

Dec. 5th: Comfortable, but retching a little. Passed catheter. In the evening she complained of rather severe pain in the right side of the abdomen, with accelerated breathing. Temperature 99·4°; pulse 136. Gave a quarter of a grain of morphia hypodermically; passed catheter and syringed out the vagina with carbolic acid lotion. One grain of opium to be given every four hours until pain ceased.—6th: Found her much better, having slept after the morphia; pain almost gone. Expressed herself as feeling comfortable; had passed urine voluntarily. For the next two days her condition was fairly satisfactory; scarcely any pain. Temperature never higher than 99·4°, but pulse continued to increase in rapidity and weakness. During the entire treatment, nourishment was given by means of enemata, consisting of beef-tea, brandy, egg, Benger's food, &c., which were well retained. The vagina was syringed out regularly, and the discharge remained healthy.

On the evening of the 8th I found her worse; delirium and restlessness had set in, and continued until her death, which occurred at 6 P.M. on Dec. 9th, the sixth day after operation. On removing the dressings after death, I found the wound in the abdomen healed, and not a drop of pus was observed. There was gaping between two of the sutures, but this was evidently caused by her restlessness before death, when she could only with difficulty be restrained from tearing off the dressings. I got permission only to reopen the abdominal wound, so that the examination was very limited, and it was also under the circumstances hurried. I found the stomach and intestines much distended with flatus. There was marked peritonitis with adhesions, which probably set in on the day after the operation. The uterus was forced down by the distended intestines, was well contracted, and there appeared complete union of the uterine wound. There was no blood or effusion in the abdominal cavity.

Remarks.—As she got over the period of collapse and escaped the second great danger—namely, septicæmia—hopes were entertained of recovery. The cause of death was peritonitis, and I may call attention to the obscurity or "latency" of the symptoms. Except for two or three hours she scarcely suffered any pain, and her temperature was never above 99·4°. The most marked feature was the accelerated pulse, gradually increasing in rapidity and weakness, which might have been an indication of exhaustion or prolonged collapse, independent of peritonitis, taking into consideration her enfeebled condition at the time of operation. Notwithstanding the unfavourable result to the mother, the case seems to me of interest, not on account of anything novel in the performance of the operation or unfortunately in the result, but from the nature and rarity of the deformity necessitating the operation. There can be no doubt of this being a case of mollities ossium occurring in adult life. The pelvis was characteristic of this deformity and contraction. The nature of the outlet has been already described, and from the slight necropsy

[11] Arch. de Zool. Expt., 1888.

made I found irregularity and deformity of the brim corresponding to the outlet, although not to such an extreme extent. The iliac and pubic bones were pressed inwards, narrowing the cavity of the pelvis transversely, and the vertebral column had sunk into the pelvis and overhung the brim. I regret very much not having had the advantage of a complete necropsy, so as to have taken measurements. The case is of interest in several respects:—(1) The rarity of the disease in this country—in the north of Ireland, at least, I believe it to be exceedingly rare; (2) the extreme degree of the deformity; (3) the complete ossification of the previously softened bones, and as a consequence the absolute necessity of the operation performed. Spiegelberg says, "It is extremely rare for complete recovery to take place or for the pelvis again to become ossified." Barnes in describing his new method of embryotomy, designed "to effect delivery in extreme cases of pelvic contraction" where Cæsarean section was previously considered the only resource, and defining the cases suitable for it, says, "Where two fingers can barely pass between the tuberosities of the ischia there will be insufficient room for manipulation, and it will be scarcely possible to guide the écraseur through the pelvis. But in these cases," he adds, "the bones will often open up under pressure applied from within." Again, Spiegelberg says, "most of such pelves are dilatable, and labours *per vias naturales* have become more common. Casati asserts that he has almost always found the osteo-malacic pelvis (which is so common in Milan) to be dilatable, and has extremely rarely been obliged to resort to Cæsarean section (only in two out of forty-one cases)." These quotations show how rare it is for complete ossification to take place. Even if the head had entered the pelvis in this case, which it could not do, delivery would have been equally impossible, as the bones at the outlet were absolutely rigid and unyielding. This was easily tested, on account of the close approximation of the ischia, where the slightest yielding could have been detected. No doubt the complete consolidation of the bones was promoted by the long freedom from child-bearing. The morbid process which deprived the bones of their calcareous matter had ceased to progress, and the bones had in the course of time become reossified. As regards the etiology of the disease, about which so little is known, I may mention that my patient attributed her illness to a damp, cold, and badly lighted house in which she lived at the time of her previous confinement. So convinced was she of this that as soon as she was able she removed to another and drier house, after which she stated she improved much more rapidly. No doubt this may have been the exciting cause, under the lowering influences of the puerperal state, in a constitution delicate at the best.

Maghera, county Londonderry.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF CHOLERA NOSTRAS.

BY PRESTON KING, M.B., B.C. CANTAB.

W. F——, aged forty-one, a labourer, had been employed on Thursday, Sept. 26th, in emptying a dead well. On Friday night, Sept. 27th, he went to bed feeling in his usual health. At 12 o'clock he woke with griping pains in the abdomen and a desire to defecate; the stool which he passed was copious and liquid. From this time till 5 A.M. the bowels acted every twenty or thirty minutes. Vomiting commenced at 2 A.M., and continued afterwards with each evacuation of the bowels. At 3 o'clock cramps in the limbs came on, first in the muscles of the feet, the toes being forcibly flexed on the soles, then in the legs and thighs, and also slightly in the muscles of the left hand. When I saw him at 6 A.M. he was tossing to and fro on his bed, crying out and complaining of severe pain in the abdomen, cramps in his legs, and thirst. His face had a pinched and anxious appearance, the eyes were sunken, and there were dark lines round them. The pulse at the wrist was small and thready, and his feet and hands were cold. Purging had ceased an hour previously. I saw the last stool he had passed, which had the characteristic rice-water appearance, being of a pale-straw colour, and seemed entirely devoid of bile. The matter which he had vomited had an almost exactly similar appearance to the stool. I injected half a grain of morphia into his arm, and ordered him a mixture of ammonia, ether, and chlorodyne every four hours, and mustard plasters to his abdomen and calves, and for his thirst rice-water, as much as he liked. At 12 noon he was considerably better, his face had lost its anxious expression, his pulse was fuller, and his extremities warm. There had been no further action of the bowels, and the pain in the abdomen was gone; there were still occasional cramps in the legs, but they were much less severe than they had been. At 9 P.M. the general improvement was still maintained, but he had passed no urine since 6 A.M. Ordered turpentine fomentations to his loins, and a mixture of liquor ammoniæ acetatis, digitalis, and a little common salt.

Sunday morning, Sept. 29th: He has had about three hours' sleep; still has occasional slight cramps. He passed a small quantity of urine at 10 P.M. last night, and twice since, the last time in fair quantity. From this time he went on well, but it was some days before he could return to work.

Remarks.—This case is of interest chiefly from the fact that it has been doubted whether there is any disease that ought to have the name of cholera except that of the true Asiatic type. It was my fortune, or my misfortune, whilst in the China Seas for a few weeks two years ago, to see some cases of Asiatic cholera, two of which, under my own care, were fatal. Comparing the present case with these, it seems only to differ from them in the mildness of its symptoms, and from the shorter duration of its various stages. With the exception of the laboured respiration and dyspnœa which came on in one of the fatal cases of the severer form of the disease, and which formed a very distressing feature, all the symptoms were present in the above instance, and only differed in degree. The appearance of the stools was identical, the facial expression of the patient was similar, and for several hours there was suppression of urine. I think, taking everything into consideration, one is justified in using the title which heads this case.

Maidstone.

A CASE OF ASTIGMATISM, HAVING A MYOPIC AND A HYPERMETROPIC SHADOW, IN THE SAME MERIDIAN OF THE SAME EYE.

BY JAS. R. TUNMER, M.R.C.S.

ON June 7th, 1890, my attention was called to the eyes of a young woman supposed to be myopic, and on examination by retinoscopy I found in the horizontal meridian of the left eye a distinctly myopic shadow, while in the same meridian of the right eye the shadow was as distinctly hypermetropic, the vertical meridian in each eye being emmetropic. Another examination was made directly afterwards by another observer, who reported both eyes myopic in the horizontal meridian. This drew more particular attention to the case, and she was re-examined, but with the same results. It was, however, noticed that while I had directed the patient to look at the centre of the mirror, the other observer had directed her to look over his right shoulder, and on my doing this, I then found a myopic shadow in the place of the hypermetropic one; so that when she looked straight before her the shadow was against the movement of the mirror, but when she looked obliquely to her left the shadow was reversed. At previous examinations of other patients I had sometimes found a shadow the reverse of that seen by another observer, without, however, noticing that really the two shadows existed in the same meridian, and this case appeared to give an explanation of the others. I have not seen such a condition described by any other observer, or mentioned in any text-book on refraction, and as it appears likely to lead to confusion and to an error in diagnosis I have thought it worth reporting. The explanation appears to be that, when looking obliquely, the meridian in use was slightly longer than when she looked straight before her, and consequently allowed the rays of light to cross just before reaching the retina, so producing the myopic shadow. Her vision in the right eye, before and after correction, was as follows:—R. E. $\frac{6}{18}$ c. − 1 D, cyl., axis vert. = $\frac{6}{6}$.

Harrogate.

A CASE OF PNEUMONIA.

By T. CAMERON, M.B., C.M. GLASG.

I WAS lately called in to see a young man, J. W——, aged eighteen, and found him suffering from the following symptoms:—He complained of an irritating cough, with slight expectoration of blood-tinged sputum. On examination dulness was found over the whole lower lobe of the right lung, with tubular breathing and crepitant râles. Temperature 104·4°; pulse 120; respiration 30. In fact, he was suffering from all the well-known symptoms of pneumonia. The following day he was seen in consultation with my friend, Dr. Gray, who confirmed my diagnosis. The patient's temperature was then 103°, and his pulse 110. From that date his temperature, pulse, and respiration went down rapidly to the normal, so that on the sixth day from my first visit he was practically well, except for a few bronchial râles and some general weakness. My object in writing this short account of the case is to point out a factor in the process of resolution hitherto neglected. The amount of sputum during the whole illness did not exceed an ounce. As the case was an undoubted one of complete consolidation of the whole lower lobe, absorption of the exuded material by the lymphatics and bloodvessels of the lung is the only explanation of the rapid recovery which took place. It has occurred to me that in this theory we have a rational explanation of the good supposed to be done by the old treatment of depletion, an empty condition of the vessels naturally favouring absorption. The treatment in this case was of the ordinary character—an expectorant mixture, and 5-grain doses of quinine to reduce the temperature. I think that in obstinate cases where resolution is delayed, a more active treatment by the absorbent class of drugs might be more beneficial than the usual continuation of expectorant and tonic medicines.

Hull.

MULTIPLE NASAL POLYPI.

By PERCY G. LEWIS, M.D.

A MONTH ago, Mrs. L——, aged fifty-four, came to me with the following history. For ten years she had suffered from more or less nasal obstruction, and for six of those years she had not been able to breathe through her nose at all. She had about eight years ago consulted several doctors, some of whom removed a polypus or two, with forceps, in the usual way. She, however, experienced no relief, and the pain of the operation was so great that she had refrained from seeking advice since. Latterly, however, she had been able to see "something growing in her nose," which caused her uneasiness. On examination both nostrils were found completely blocked with a number of mucous polypi, and the finger passed up behind the soft palate detected a number of grape-like masses there. Having painted the nostrils with cocaine I removed, practically without pain, fifty-one polypi in all, with a Hilton's snare, the operation requiring six separate sittings. Practically there was no bleeding. The snaring of those which projected behind the soft palate was greatly facilitated by passing the finger behind it and pushing them forward. By using a Thudichum's speculum, forehead reflector, and gaslight, a very good illumination was obtained. The polypi varied in size from ¼ in. to ⅜ in., three being over an inch in diameter. After the last sitting the patient could breathe freely through each nostril.

Folkestone.

EPIDEMIC PNEUMONIA.

By A. BRENCHLEY, M.D.

IN May and June, 1889, in South London, I had several cases of pneumonia—about twelve in all. Coming close together as regards time—four, also, being in one family—forced the conclusion on me that they must be epidemic. The symptoms were those usual to pneumonia. Fever, basic lung inflammation, dulness, crepitation (generally spreading to the opposite side), a good deal of pain from pleuritic complication, spitting of blood, and a thick glairy, tenacious mucus of a rusty colour adhering to utensils, dyspnœa, &c. Though of various ages, and some being in extreme danger at the time, they all eventually got well. To account for the cause of these cases at the time gave me a good deal of thought; but, after the experience of the winter epidemic of influenza, I have thought that they might have been probably in some way connected with that—a sort of mild epidemic as a forerunner of the more severe (in point of numbers). From my experience there is no doubt pneumonia is at times contagious or communicable, and I knew an instance where the facts strongly supported the idea that a medical man caught it while attending a case, and died, though there is great difficulty in proving such things.

Denmark-hill, S.E.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

BELGRAVE HOSPITAL FOR CHILDREN.

A CASE OF OPERATION FOR DEVIATED SEPTUM; REMARKS.

(Under the care of Mr. CLINTON DENT.)

THE symptoms produced by the condition of deviation of the septum of the nose which is illustrated by this case frequently cause considerable discomfort to the patient the subject of the deformity. Beyond the obstruction to the nostril, and other symptoms complained of by this patient, there may be chronic nasal catarrh, frontal headache, giddiness, and, if the deformity is acquired, an altered tone of the voice. Rosenthal,[1] after many examinations, found the deviations most frequent on the left side; the majority of these were situated in the anterior three-fourths of the cavity, therefore implicating chiefly the cartilage. Von Volkmann,[2] who formerly considered all deflections of the septum as due to injury, states that he now considers the majority dependent upon arrest of development. Dr. Robertson[3] of Detroit, who examined 227 cases, found eighty-three clear cases of injury, whilst of the remainder, half are said to have presented evidence of fracture or of dislocation. Dr. Delavan,[4] from a study of the subject, infers that the septum is one of the last parts of the nose to assume its ultimate form. The delay in the general development of the nose is followed at a later period by a sudden activity of growth, involving consequent inequality of development; this occurring probably not before the age of seven years. The septum, of irregular construction, osseous and strong in its posterior aspect and weak in its anterior, surrounded by unyielding walls, bends in the direction of least resistance as growth proceeds, and the various parts being pushed aside from their various planes, a so-called congenital deflection follows.[3] It is stated that race is a strong predisposing cause (in the European 50 per cent. present more or less marked deviation, the Slavonic and Hebrew races furnishing the highest proportion); that among primitive types deformities are rare, while in the highly civilised they are almost the rule, catarrhal conditions due to surroundings being an important factor. For the following notes we are indebted to Miss F. M. Dickinson, house surgeon.

William G——, aged seven, was admitted to the hospital on Jan. 29th, 1890. His nose was markedly curved, the bony septum deviating to the left to a distance of nearly three-eighths of an inch from the vertical, the nasal cartilage below this point curving back towards the middle line. On looking into the left nostril the passage was seen to be obstructed by a red mucous membrane covered body just within the anterior nares, not unlike a polypus in appearance.

[1] Thèse de Doctorat
[2] Berlin. Klin. Woch, 1887.
[3] Sajous: Ann. Un. Med. Sc., 1888, p 272, vol. iii.
[4] New York Med. Journal, 1887.

This was found to be the septum, which projected in its whole length into the left nostril, almost entirely obliterating the cavity. The condition had existed since birth and the disfigurement caused by it was considerable. The patient breathed habitually through the mouth, he could be made to breathe through the nose, but not through the left nostril alone. Breathing was somewhat snoring in character, especially at night.

The parents being extremely anxious that something should be done to rectify the condition, on account alike of the disfigurement, the difficulty of breathing, and the stertor, Mr. Dent operated on Feb. 18th. The first steps were precisely the same as those of an ordinary Rouge's operation. A free incision was made along the line of reflexion of the mucous membrane beneath the upper lip; then the attachments of the alæ of the nose on both sides to the superior maxilla were rapidly separated with the scissors, and a horizontal cut freed the connexion of the cartilaginous septum below. By drawing up the now detached soft parts of the nose a good view of the interior was obtained. A vertical cut was next made with fine bone-cutting forceps well back in the septum, and it was then found easy to press the loosened plate towards the patent side of the nose. A single suture passed through this piece of the septum, and the cut parts below just to the right of the median line was required in order to maintain the septum in its new position. In replacing the cartilaginous alæ and the soft parts of the nose care was taken to draw them over to the left side. Thus a species of "autoplastic par glissement" was effected, the septum after division being shifted in one direction and the soft parts in the other. The little finger could now with ease be passed from the anterior along either side of the septum right back to the posterior nares, and it was evident that the passage was perfectly clear on both sides. The inferior turbinated bone was also removed in great part. Two pieces of drainage tube, united by a silk thread in front, were pressed into the nostrils to maintain the patency of the passages, and the soft parts were kept in position by a second suture and strapping applied across the face as after operation for harelip. A pad was also strapped so as to apply pressure to the side of the nose. The eyes were closed by pads and bandage for the first twenty-four hours.

Feb. 19th.—Very little swelling or ecchymosis of eyelids or face. There is a considerable amount of muco-purulent discharge from the nostrils, occasionally streaked with blood. Drainage-tubes removed, and reinserted without difficulty; it is noticeable that a larger drainage-tube could be passed into the left nostril than into the right. The patient took food well, and had no difficulty in swallowing.

20th.—Temperature rose to 103·2°; patient was restless; no appetite. No increased swelling of face or other local trouble. Temperature a little over 100° the two following nights. After that recovery was uninterrupted. Drainage-tubes left out on Feb. 24th; patient discharged.

April 15th.—Patient seen again. The appearance of the nose is decidedly improved. There is still some curve to the left in the lower part of the septum, and there is slight thickening of the septum and the tissues generally, but these are little noticeable, and the general appearance is that of a fairly straight and well-formed nose. Both nostrils are patent; there is now no obstruction at all of either side. The catarrhal discharge has persisted to some extent since patient left the hospital, and there is still slight stertor at night, but the difficulty in breathing is much relieved. There is no pain, or tenderness on pressure.

Remarks by Mr. DENT.—The severity of the operation may possibly seem disproportionate to the condition to be rectified; but in the present case the disfigurement was extremely noticeable, it was likely to increase, the difficulty of breathing also was a source of considerable discomfort, and, in the case of lung trouble supervening, might even have become a condition of serious import. Other methods, such as an apparatus designed to remedy the deformity by pressure, would scarcely have been possible in a child, or, even if possible, would have been very tedious, and unlikely to be permanently successful. The chief difficulty in the operation arose from the limited room there was to work in, since everything had to be carried out through the small space between the upper lip and the superior maxilla. It is usually desirable to remove the inferior turbinate bone, since this alone may cause stertor.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

VESICAL CALCULUS; SUPRA-PUBIC LITHOTOMY; CURE.

(Under the care of Mr. CONNEL WHIPPLE.)

THIS case is an interesting one of removal of a large calculus from the bladder by means of the high operation, of which we have published many instances during the last few years. The prediction of Cheselden that the supra-pubic method, which he was then abandoning, "might hereafter be practised with greater success" has been amply fulfilled in modern times.

T. B——, a miner, aged sixty-seven, was admitted on Oct. 29th, 1889, complaining of frequent and painful micturition. During the act the pain was felt at the tip of the penis, and this was followed by burning pain in the perineum. He stated that five years ago he fell across an iron bolt, striking and bruising his perineum. His urine at once became blood-stained, and continued so more or less for two years, the amount of blood being increased by exercise. Micturition was painful and frequent, often occurring ten times in a night. For the last three years he had not passed any blood in his urine, but the frequency of micturition continued. He never passed any gravel.

On admission he was a fairly nourished, pale-faced old man. His urine was acid, sp. gr. 1016, and contained pus. He was sounded on Oct. 30th and again on Nov. 12th and 16th whilst lying in bed, but nothing was found. Throughout November the bladder was washed out daily. Occasionally there was great difficulty in introducing a soft catheter for this purpose, and on some days it could not be done. The obstruction appeared to be at the neck of the bladder. The bladder was very irritable, and would never retain more than two or three ounces of fluid. Notwithstanding the irrigation, the urine became alkaline, triple phosphate crystals were found, and the amount of pus increased up to one-fourth. As the pain and frequency of micturition continued, he was again sounded on Dec. 6th whilst standing, and a very large stone found, almost filling the bladder. It was decided to remove this by supra-pubic method.

On Dec. 14th methylene was given. Very great difficulty was experienced in introducing a catheter. The bladder was washed out; four ounces of warm boracic solution were injected into the bladder, and two ounces and a half into a rectal bag. The incision in the middle line of the abdomen was made, and the bladder wound well exposed to view. This was opened, and a large, smooth, oval calculus removed, weighing 1820 grains. The stone consisted of uric acid with a little superficial coating of phosphates. A supra-pubic indiarubber tube was inserted. On Dec. 18th the tube was removed, but was reinserted next day and kept in for a week. The supra-pubic wound was quite healed and urine normal when the patient was discharged on Jan. 31st, 1890.

The chief points worthy of notice in this case were the duration of symptoms of stone, the difficulty of sounding and finding the stone (which nearly filled the bladder), and the difficulty of introducing catheters. This difficulty was probably owing to the bladder contracting on the stone, as, after the operation, there was never any difficulty in passing catheters varying in size from No. 10 to 12 to draw off the urine. The largest amount of boracic solution that could be injected into the bladder at the operation was four ounces; which is small compared with the amount that Jacobson states should be injected—viz., eight to ten ounces. Jacobson gives ten to twelve ounces, and Sir Henry Thompson twelve to fourteen ounces as the amount to be injected into the rectal bag; but in this case only two ounces and a half could be injected, as that was the capacity of the largest rectal bag at our command. With these small amounts the bladder was well exposed above the pubes. Bearing in mind this case, with its difficulties (the patient being very fat and the bladder small and irritable), it is questionable whether the large quantity of fluid directed in the text-books to be injected into the bladder and rectal bag is ever necessary.

UNWHOLESOME FOOD AT ABERDEEN.—During the month of May 28,931 lb. of fish, 686 lb. of beef, and 63 lb. of mutton were seized by the sanitary inspector, and were, with the owners' consent, destroyed as being unwholesome.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

The Artificial Maturation of Immature Senile Cataract by Trituration.

AN ordinary meeting of this Society was held on the 12th inst., the President, Dr. Hughlings Jackson, in the chair.

Mr. MCHARDY concluded his paper on the Maturation of Immature Senile Cataract by Trituration, the first part of which he had read before the Society at the previous meeting on May 1st. Amongst the last hundred cases two had occurred in which it was necessary to remove the lens sooner than was intended, but in both useful vision was restored. In 3 per cent. of the cases sight had been lost.

Mr. SIMEON SNELL (Sheffield) read a paper on the Artificial Ripening of Cataract and Förster's operation. After a brief reference to other methods of dealing with the class of cataracts in which the process of maturation proceeded so slowly as greatly to interfere with the comfort of the patient, and often to occasion worry and distress, he proceeded to speak of Förster's operation. He had carried out this method of hastening maturation by trituration of the lens capsule through the cornea in ten cases, representing about 6 or 7 per cent. of the cataract (senile) operations during the same period. He furnished some details of each case, and expressed approval of the practice. Performed with care, it appeared free from harm, and if its immediate object was not obtained, as in two of his cases, no evil results had ensued. No iritis or ocular irritation had been occasioned in any case. The increased opacity showed itself frequently a few days after the operation, and extraction of cataract could generally be proceeded with in a month or six weeks. The stroking of the capsule should be effected with gentleness, and in the central portion as much as possible. The iridectomies in his case had been small and made downwards, and the extractions were performed by a shallow lower flap.

Mr. CRITCHETT said that, at a meeting at Leeds a year ago, he had expressed the hope that at no distant date an opportunity might offer of gaining statistics on this important question, which must be faced sooner or later. Already great progress had been made in the methods for extracting cataracts. He alluded to seven or eight cases, which made up his experience of the subject, and which had been commenced under great compulsion, and proceeded with only with great caution and some misgiving. Iritis had occurred in two, but no eye had been lost. During the last few years his success had quite equalled his expectations, and he thought that immature cataract could be removed almost as well as when mature. He was convinced that it was wiser to wait till the patient could no longer see to find his way about before operating, and referred to a saying of his father's: "You must always remember that the probabilities in ophthalmic surgery are so delightful that everyone would want to become an oculist; the possibilities, however, are so dreadful that they can only be mentioned to oneself in a whisper."

Mr. TWEEDY said that his experience in dealing with immature senile cataract was scarcely comparable with Mr. McHardy's. For more than nine years he had operated, when necessity arose, upon unripe cataract—that is, where both eyes were so affected that the patient was unable to follow his occupation. The results had been satisfactory, and this he ascribed entirely to the *modus operandi* he employed, which consisted essentially in opening the lens capsule at its extreme upper periphery after performing iridectomy. This procedure left the face of the anterior capsule untouched, and any lens matter that remained behind, or which formed subsequently, was enclosed in the capsule in its proper position, and did not come into contact with the iris. In the seven years 1881 to 1888 he had operated upon twenty-nine immature senile cataracts at Moorfields Hospital. Of these, one eye was lost from late serous iritis and glaucoma, two suffered from a sharp attack of iritis, and one lost a little vitreous, but these three and all the other cases recovered with good vision except two who had old vitreous opacities. He assured Mr. McHardy that most of his *confrères* were fully alive to the importance of dealing with this class of cases, which should, of course, only include those in which a considerable portion of the lens was free from cataractous opacity. He had had no personal experience of trituration of the lens, but he thought there were several possible drawbacks to the operation. Mr. McHardy had stated that iritis frequently followed trituration, and this was certainly an undesirable state of things to precede extraction. There was another possible drawback, namely, that the friction might induce thickening of the anterior capsule, and thereby lead to difficulties in secondary capsule operations. Of the twenty-nine cases referred to, a secondary needling was required in thirteen. He had not examined his records for the last two years, but believed that the results were substantially the same as those referred to.

Mr. HULKE said that he had come rather to listen and learn than to speak, as his experience did not furnish him with sufficient grounds for forming a judgment; but he fully endorsed the views of Mr. Critchett and Mr. Tweedy with regard to the ethics of this question, and would not himself feel justified in meditating the operation or suggesting it to a patient.

Mr. MACKINLAY said he had not taken kindly to the trituration operation described by Mr. McHardy when he had first seen it performed. Recently he had been more favourably impressed with it, and had performed the operation in about twelve cases. In all he had obtained satisfactory results, and no undue toughness of the capsule had followed.

Mr. HENRY EALES (Birmingham) said that he had not yet had a very wide experience in operating on immature cataracts, except in some cases of nuclear opacity. He had operated under such circumstances now about thirty-nine times, being at first compelled by circumstances. One case was that of a farmer, who had already lost one eye and was incapacitated for work by opacity in the other lens. The result of operation was good, the man obtaining vision equivalent to $\frac{1}{4}$. In no case was there failure in obtaining maturation. The lenses were removed about six weeks later. Some cases exhibited slender adhesions of the iris to the capsule, which easily gave way under atropine. The lens generally came away very cleanly, leaving a bright pupil, and no after-needling was required.

Dr. HILL GRIFFITH (Manchester) had done the operation in twenty-eight cases, but always by direct trituration by means of a silver spoon introduced through the iridectomy wound. Out of twenty-four of these cases so treated, there was no result whatever in thirteen, and in one of these partial dislocation of the lens took place. This was the only mishap he had met with from the operation. In the remaining eleven cases rapid maturation was effected, followed by extraction, with slight loss of vision in one case only. Good vision was ultimately obtained in all, but convalescence was very tedious from retention of cortex. The operation was useless for dealing with opacities which had no natural tendency to progress, as he had proved in granular cataract and cart-wheel-like opacities in the posterior layers of the lens, and he had been disappointed in several cases of exceptionally slow growing cataracts; so that he thought that the cases in which the procedure might be of use were not of so frequent occurrence as Mr. McHardy's statistics seemed to indicate.

Mr. BRAILEY thought the question required very careful examination—first, on account of the limited applicability of the method; and secondly, with regard to its ethics. In many cases the condition of the lenses did not seriously interfere with the occupation and progressed extremely slowly. Of eighty-two immature cataracts seen in one year and a half twenty-six were seen a second time, and of these only four required operation, and only four others had progressed appreciably. In many vision had actually improved, probably through diminished use of the eyes, which he recommended. The ethics of the question required also careful consideration. Iridectomy had been introduced as a panacea for everything, and its frequent performance had brought operating to some extent into disrepute. Many cases operated upon when immature would probably not have advanced if left alone. The eye was subjected to great risk by the operation, and he thought they should advance very cautiously in its employment.

Mr. MCHARDY replied briefly to some of the remarks made by different speakers.

The following cases and card specimens were shown:—

Sir WILLIAM BOWMAN: Portrait of the late Professor Donders of Utrecht.

Dr. W. J. COLLINS: Cases of Persistent Capsulo-pupillary Membrane.

Mr. GUNN (for Dr. Werner of Dublin): Abnormality of Retinal Veins.

Mr. STANFORD MORTON: (1) Tumour of Plica Semilunaris; (2) Upward Coloboma of Iris.

Mr. LAWFORD: Embolism of a Branch of the Central Retinal Artery.

Mr. GUNN: Case of Proptosis (Unilateral), with Intracranial Bruit.

Mr. BRAILEY: Case of Microphthalmos, with other Congenital Defects.

Notices of Books.

Practical Electricity in Medicine and Surgery. By G. A. LIEBIG, Jun., Ph.D., and GEORGE H. ROHÉ, M.D. Philadelphia and London: F. A. Davis. 1890.—This book is arranged in three parts of very varying merit as a contribution to practical medicine. The first deals with the physics of electricity and magnetism—a subject which it is difficult to treat in a manner at once adequate and intelligible to those who are without a special training. The method in this case is too academic. The pages abound in mathematical formulæ, and there is little information as to how they are derived, still less with regard to their application. Neither is an acquaintance with many formulæ needed, even for the scientific use of medical batteries. We think that more space should have been given to the explanation of laws, and less to their algebraical expressions. The most profitable reading for the average mind will be found in the description of electrical apparatus at the end. Part II., on the other hand, fulfils its purpose well. The chapters on electro-physiology and electro-diagnosis are well written, clear, and fairly complete. They are practically a compendium of what is to be found in larger standard works, and notably Erb's "Electro-Therapeutics," on which they seem to have been based. There is a series of plates to exhibit v. Ziemssen's motor points, and others to illustrate the effects of stimulating the facial muscles. These, with the related context, are highly instructive. The third chapter in this part contains a notice of various forms of medical batteries and appliances, with very judicious advice for their selection. The illustrations also are admirable, and would give the impression that American instrument makers respond very efficiently to the wants of electro-therapeutists. Part III. is concerned directly with "the applications of electricity in the treatment of disease." General therapeutic effects are first noticed, and under this heading are given instructions for the administration of different forms of the electric bath, with some of the indications for its use. The physiological effects of localised galvanisation are passed in review, and necessarily dismissed with a few brief remarks, but these are to the point. We gladly endorse the authors' protest against the too free use of the term "catalytic," thinking with them that it is a reproach to science. The substitution of the phrase "subaural galvanisation" for "galvanisation of the sympathetic," in accordance with Dr. de Watteville's suggestion, is undoubtedly judicious. The chapter on special electro-therapeutics professes to give in detail the appropriate treatment of the various diseases to which electricity is applied. The list is a long one, and might seem to suggest impossible pretensions. It is true that anyone who relied upon electro-therapeutics for the cure of many of the affections cited would in all probability be disappointed, and to assert of any special method of application that it is the best is hardly warrantable. A science that is empirical in many aspects must claim an extended field for its exercise, and, though it is not expressly stated, the methods prescribed are those which have been chosen on the ground of experience by eminent authorities. It is open to every practitioner to vary them for himself, but they are a useful guide to the beginner, and rightly secure a place in a work of this kind. Diseases of the female generative organs receive a large share of attention. Apostoli's method is described in detail, and the result of that operator's experience in the treatment of peri-uterine inflammations and of uterine tumours is given in his own words. It is in the nature of things that unlooked-for success encourages expectation, and we are strongly of opinion that too much is expected of electricity in the treatment of diseases of women. There are very few indeed for which it is not recommended, apparently with confidence. Such pretensions on the part of its supporters cannot be too strongly deprecated as tending to discredit this branch of therapeutics.

The Biology of Daily Life. By JOHN HENRY NAPPER NEVILL, M.A. Pp. 136. London: Kegan Paul. 1890.—In the preface to this little book the author states that last year a German professor of chemistry wrote to him from a town in Saxony, asking for an exhaustive and impartial account of the system of Mr. Joseph Wallace. This request set him to try to explain as far as he could (keeping carefully to the outside of the system itself) the connexion between Wallace's discoveries and the generally accepted scientific teaching in chemistry and biology. All we can say is that if this be the answer that was sent to his German friend, he will be little the wiser when he has read it. The major part of the book is made up of quotations from Herbert Spencer, Huxley, Pavy, Klein, and others, the consideration of which leads him to regard the protoplasm theory as "an over-hasty generalisation, which has done harm by making us practically ignore the law of interchange and its corollaries. It has explained away the distinction between the animal and the vegetable." The author appears to think that the investigation and discrimination of "tiny organisms" is a crime. Speaking of one, he says: "Cohn calls it Clathrocystis roseo-persinica, and Lankester comes in with a second name ..... Bacterium rubescens. How suggestive is this inceptive rubescens, the bacterium that is beginning to blush. Outraged humanity may cause that blush to extend from that tiny point until universal scorn and shame will put a stop to these abominable absurdities.' Where the outrage to humanity occurs we cannot divine, and at what the universal scorn is to be pointed is entirely obscure. That the author is an anti-vivisectionist, an anti-vaccinationist, and a vegetarian we gather from his book.

The Asclepiad. By BENJAMIN WARD RICHARDSON, M.D., F.R.S. No. 26, Vol. VII. Longmans, Green, & Co.—The view taken by the industrious author of this serial upon the present reversion in this country to the study of hypnotism is clearly indicated in the title he has selected for his commentary upon the subject. "The Hypnotic Epidemic" is at present pervading the land; and whilst he doubts the scientific value of some of the evidence, he deplores the suggestion of its being universally applicable for anæsthesia, whilst he also shows that to a certain degree hypnotism and suggestion play a notable part in mental development. He predicts that as time goes on fewer people will be susceptible to hypnotism than at present. The memoir of this number is that of William Cullen, who "was original from the beginning to the end of the chapter," most industrious, retentive, unselfish, and an admirable teacher. His qualities as a chemist, a physiologist, pathologist, nosologist, therapeutist, and practitioner are succinctly pointed out; and there are two excellent portraits of this distinguished man. We must be all grateful to Dr. Richardson for these admirable studies of our famous forerunners. The number contains also a comparison of Asphyxia and Apnœa; some practical memoranda on the Sequelæ of Influenza, Epistaxis, and the value of Bloodletting as a means of lessening Fever Heat; and a reproduction of Reports to the British Association upon Nitrite of Amyl.

THE LANCET.

LONDON: SATURDAY, JUNE 28, 1890.

A REPORT has been submitted to the corporation of Leeds by Dr. SPOTTISWOODE CAMERON on an outbreak of typhus in that borough during the present quarter of this year. From the report it would seem that a man had suffered from typhus since March 31st last, but that this fact only came to light when another patient who had been infected from him was attacked a month later. By this time the mischief was largely done, and some fifteen cases resulted. But directly the disease did come under cognisance of the health department very effectual measures were taken to prevent extension of the infection, and the outbreak was before long brought to an end. There are several points of general interest that arise on Dr. CAMERON'S detailed report. In the first place, we find that in addition to the removal to hospital of the patients themselves, the practice was adopted of also isolating in a separate establishment those persons who had come into contact with the sick; and in this instance the advantage of the system was shown by the fact that in three of these persons typhus developed itself during the period of so-called quarantine. Such a system is in this country as yet a purely voluntary one, although a Bill has this session been submitted to Parliament which, in its first stage, aimed at making it compulsory in certain cases. If such a practice were to become at all general, it is obvious that sanitary authorities would have to make special arrangements accordingly, and that these arrangements would have to be in addition to those adopted for the isolation of the sick. In the Leeds case a house was used which is primarily intended to receive healthy persons pending the disinfection of their homes.

Another point to which prominence is given is the fact that the first case of typhus was not recognised, and it is added that there are grounds for believing that typhus not uncommonly escapes detection in Leeds and elsewhere. Indeed, the second case in this outbreak seems to have been promptly detected and reported, merely because it happened that the medical practitioner who was called in to the patient had formerly been resident medical officer to the Leeds Fever Hospital. This experience is by no means exceptional. Medical students have but few chances of seeing typhus; indeed, the increasing practice of leaving the isolation of infectious fevers to sanitary authorities is steadily depriving the teachers in our general hospitals of opportunities of giving clinical instruction as to these diseases which it is so important in the interests of public health to recognise at an early stage. There are obvious advantages in excluding the infectious fevers from general hospitals, but the plan has also grave disadvantages unless it is supplemented by arrangements for clinical teaching at the bedside of fever patients in some other institutions. A beginning in this direction has been made in London under arrangements with the Metropolitan Asylums Board, and since Leeds possesses a school of medicine it is the more desirable that some similar plan should be adopted there for enabling those who are studying medicine in the borough to attend a course of instruction in the isolation hospitals belonging to the corporation.

Another point deserving attention is the circumstance that Leeds was for some time in danger of a wide diffusion of typhus, because it has failed to make arrangements for securing the prompt notification of infectious diseases. Our views on the subject of compulsory notification are well known, and we need not now refer to the points in which we regard the existing legislation on this subject to be defective. But a law having been passed giving sanitary authorities the power to acquire the information which is needed, with a view to prevent the spread of infectious diseases amongst the communities for whom they are responsible, it is by no means creditable to Leeds that this borough should be almost the only large town in England which has hitherto declined to adopt the provisions of the Act in question. Chance, in all probability, alone saved Leeds from a substantial prevalence of typhus this spring, and, in view of the lesson which has now been learned, we doubt whether the inhabitants would view with complacency the occurrence of any other prevalence of disease which had diffused itself owing to a similar neglect on the part of the sanitary authority.

And lastly, we would note that the area in which typhus recently spread has acquired for itself a bad name in the annals of Leeds infectious diseases. The neighbourhood is said to be one surrounded by property in which these diseases are habitually more or less prevalent; and, from Dr. CAMERON'S suggestions with regard to its partial demolition, it seems evident that absence of proper movement of air in and about dwellings is one of its prominent defects. In fact, he advises that a wide street should be run through it, and he explains that this, by giving more air in the streets around, would do something "towards relieving this neighbourhood from the opprobrium of being a hot-bed of fever." The truth is, that Leeds is one of the backward towns of England in respect of open space about houses; it contains a large number of back-to-back houses, and there are other areas in which the through-ventilation of dwelling-houses is impracticable. And, going hand-in-hand with this grave defect, Leeds is also one of the few remaining typhus towns of England. In fact, in only two out of a comparatively long series of years has it been free from typhus mortality. On the whole, it has latterly exhibited improvement in this respect, although in 1886 it lapsed into much the same condition as regards death from typhus that prevailed when that disease was more common in the previous decennium. But if typhus is to be finally expunged from the causes of sickness and death in Leeds, movement of air through dwellings should be secured throughout the borough; and a beginning in this direction should be initiated by requiring that every new dwelling-house shall have open space both to the front and to the rear, so that by means of windows opening onto these spaces a cross current of air and adequate ventilation may be obtained. Such an arrangement, in short, should everywhere be regarded as one of the essential conditions of a healthy dwelling.

"RATIONALISM and Freethought in Medicine" forms the subject of an able address by Dr. W. J. COLLINS to the Abernethian Society. Its object is, "To inquire how far

are the fundamental conceptions of medicine rational? How far is the thought which it engages untrammelled by tradition and unfettered by authority?" That this is a very pertinent subject for us to consider no one will venture to dispute. We all defer to reason in the abstract, but if each of us could be compelled to realise and to confess how small a portion of our opinions on things scientific we can fairly attribute to observation and reasoning, and how many of them originate in usage, authority, and prejudice, we should probably be much startled by the disclosure.

Dr. COLLINS is no doubt quite right in thinking that medicine owes many of its defects as a science to the circumstances of its origin. "In any logical classification of the sciences medicine should appear as a part of applied biology; but medicine was practised as an art or trade ages before biological science was dreamt of, and while it is futile to have wished it otherwise, we cannot fail to recognise and regret the inevitable influence of such an anomalous sequence." He proceeds to point out that these facts, connected with the genesis of medicine, account for its relation with such spurious philosophy as astrology, occultism, mysticism, and electro-biology, and for the slow prevalence of purely philosophic and completely rationalised conceptions. Especially has medicine, in this author's view, "been held back and enslaved by its relations with theology and metaphysics. Theology offered formidable obstacles to sanitary progress, under the impression that to avoid pestilence was to defy the Almighty; for more than a century not a man, woman, or child in Europe took a bath, the passion for clean linen was accounted accursed, and personal cleanliness was impious vanity." It is only fair to acknowledge how great has been the progress made in such matters, and how many of the religious teachers of the present day are leaders in the cause of sanitary and social reform.

Dr. COLLINS thinks, and with reason, that medicine has suffered much from vague hypotheses and premature generalisations. Even the germ hypothesis has, he believes, "been carried to an untenable completeness. Micro-organisms have come to be regarded more in the light of their relation to diseases of man than in that of their own life-history.....the paramount importance of soil has been absurdly underrated as a determining factor in specificity." The facts in support of this last assertion are very striking. "The bacillus of mouse septicæmia, which is uniformly fatal to house mice within three days, is harmless to field mice; while goats, hedgehogs, sparrows, horses, cows, and most breeds of sheep are susceptible to inoculated anthrax, dogs, cats, white rats, and Algerian sheep are not so. That disturbing conditions may bring about a susceptibility in the habitually unpredisposed is shown by the fact that fish and frogs, which are normally unaffected by anthrax, are infected if their temperature is artificially raised." We here touch one of the most cardinal questions in the entire range of medicine. The recent progress of medical science has been mainly in the direction of discovering the nature, laws of growth, and modes of operation of the specific causes of disease. Such knowledge is of the utmost importance, and the progress made in its acquisition has been of incalculable value. But the soil is as important as the seed, and nothing is more to be desired at the present day than some clearer knowledge why one organism affords a suitable nidus for the germs of cholera, enteric fever, septicæmia, or phthisis, while another proves wholly impervious to their influence. While this problem remains unsolved—and its complete solution seems still far distant—the deepest mystery of our art continues to elude us.

The latter part of the address on which we are commenting is occupied with a brief sketch of the history of medicine from the time of HIPPOCRATES with the view of showing the progress of purely rational conceptions. How slow such progress has been is exemplified by such facts as the purchase by Parliament in 1739 for £50,000 of a quack remedy for stone which was found to consist of calcined eggshells and other such ingredients; or by the record of PEPYS, that he carried a hare's foot in his pocket for indigestion, and that "he was now mighty well, and truly I can impute it to my fresh hare's foot." But gradually the light dawns, and the exact discoveries associated with the names of HARVEY, MALPIGHI, SYDENHAM, BOERHAAVE, HUNTER, and JENNER wrought powerfully towards the inauguration of a new and more philosophic era. "Do not think, but try," was the Hunterian maxim, and marks the transition in medicine from hypothesis to experiment, from Galenic theorising to Baconian induction. Dr. COLLINS emphatically eulogises the Hunterian method. "His was a habit of work which has not too many followers even yet. The mere case-taking fact-hunter is always with us; the dull laborious man of research, with his eye glued to a microscope and his nose stuck into a test tube, is ever on hand in our laboratories; but medical philosophers are few and far between, and the tendency at present is to narrow rather than widen the basis of scientific culture in the profession." The well-known and noble words of Sir WILLIAM LAWRENCE are quoted with approval: "I willingly concede to every man what I claim for myself—the freest range of thought and expression, and am perfectly indifferent whether the sentiments of others on speculative subjects coincide with or differ from my own. Instead of wishing or expecting that uniformity of opinion should be established, I am convinced that it is neither practicable nor desirable. To quarrel with one who thinks differently from ourselves would be no less unreasonable than to be angry with him for having features unlike our own." The day is probably not very remote when persecution, ostracism, or censure for differences of opinion or belief will be regarded as not only immoral but absurd. It will be recognised that a conviction founded on reason can be legitimately attacked only by reasoning, and that to exercise pressure to compel a man to change his belief involves a truly ludicrous misapplication of means to ends.

In conclusion, we may quote a remark by the author on specialism. "A specialist," he says, "without general knowledge, realises the ideal of the grammarian who, on his death-bed, lamented that, instead of dissipating his energy over the whole of etymology, he had not restricted his studies to the accusative case."

DR. ARMAUER HANSEN of Bergen, whose name is well known in connexion with leprosy, contributes to the current number of *Virchow's Archiv* (Bd. cxx., Hft. 3) an interesting article upon the vexed question of the transmission of

the disease. His remarks have been evoked by a statement of BAUMGARTEN—based on the fact that leprosy does not prevail among the Norwegians who have emigrated to North America—showing that it is an infectious disease, which is diminishing in virulence. HANSEN, therefore, seeks to defend his position that leprosy is not inherited. He shows, indeed, that in Norway there has been a decided decrease in the disease, for whereas in 1856 there were as many as 3000 lepers in that country, now the number is barely more than 800. Taking the statistics of Nordmoere, near Christiansund, from 1856 to 1880, he also proves that there has been a considerable decline in the annual number of fresh cases, and in the total occurring at the close of each year. But these facts are not to be explained on BAUMGARTEN'S hypothesis, for the decrease has taken place coincidently with improved measures of isolation. On the other hand, HANSEN cannot concur in the view, popularised in some quarters, that leprosy is on the increase. It is true that in the Sandwich Islands the disease has increased in great proportions, but it is less easy to affirm this of other parts—e.g., India.

Turning to the subject of inheritance, he gives BAUMGARTEN'S opinion that in this respect leprosy resembles tuberculosis. At the same time, to adopt the view of a pure heredity involves the assumption that leprosy may remain latent, and only reappear in later life, or even in succeeding generations. The former example would seem to harmonise with "latent inherited" syphilis, but HANSEN points out that it is highly probable that such cases may have congenital visceral lesions, and that the "latency" only really applies to the external manifestations of the disease. Latency of syphilis enduring throughout a whole generation is unknown. But heredity, as we know it, in the transmission of physiological characters, is not reproduced in the history of these infective diseases. Thus, heredity generally involves the transmission of attributes to the same sex, or the appearance of characters at definite ages, or atavism, none of which conditions obtain in the "inherited" transmission of infection. Much more must the inheritance of disease differ from normal inheritance when the virus is of a parasitic nature. A parasite cannot be transmitted by inheritance; it may be handed on to the child by the parent, but in a different sense from the transmission of qualities primarily impressed on sperm-cell or germ-cell. To speak of "inherited infection" is, he considers, a contradiction in terms. Now, it is quite true that leprosy is a family disease, but this fact favours contagiousness quite as much as it does heredity. And both the decrease of the disease in Norway and its increase in the Sandwich Islands are far more explicable on the doctrine of contagiousness than on that of inherited transmission. Isolation can control the one far more than the other.

It is improbable, too, that the virulence of the disease is dying out, as BAUMGARTEN thinks. This view seems to be supported by the fact that in Norway there is an increasing proportion of the milder "anæsthetic" cases as compared with the "tubercular" forms. But here again the adoption of improved measures of isolation explains in part this divergence, since it is just the worst and most helpless patients who are sent to the asylums. The theory that the virus is becoming weakened is not borne out by the discovery of the bacillus lepræ; and hitherto but little success has attended experiments on its cultivation and attenuation. The notion of an "inherited infection" rather than a contagion would, if true, render futile attempts to control the spread of the disease, since many persons might have it in the "latent" form. The proposition is, however, reduced to an absurdity when we regard the cases of the Sandwich Islands, which prior to 1840 were free from the disease. For it would involve—to explain the enormous spread of the disease—not only the assumption of the most extensive promiscuous intercourse, but an actual preference by the women for lepers! Dr. HANSEN is then fully persuaded of the contagiousness of leprosy, and of the efficacy of hygiene and isolation for its suppression. He attributes the immunity of the Norwegians in America to their adoption of habits of greater cleanliness and their improved social state. That there are instances of contagion, well authenticated, is an absolute fact; even BOECK, anti-contagionist as he was, met with such an instance when in America. But there are conditions and limits to the contagion; probably it occurs only through inoculation, and, like syphilis, it may be transmitted from parent to child, as well as by personal intercourse in later life.

Annotations.

"Ne quid nimis."

THE COUNCIL ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THERE are seven candidates for the three vacant seats on the Council; the names are set below in chronological order of admission to the Fellowship: Mr. Walter Rivington, 1863; Mr. R. Brudenell Carter, 1864; Mr. John Langton, 1865; Mr. Edward Bellamy, 1867; Mr. Marcus Beck, 1869; Mr. W. Mitchell Banks, 1869; Mr. R. Lawson Tait, 1871. Mr. Mitchell Banks and Mr. Lawson Tait are representatives of the provincial Fellows; the rest reside and practise in London. In the endeavour to fairly put before the profession the qualifications and claims of these seven candidates, we may practically and roughly classify them in two divisions—first, Progressive; secondly, Stationary. In the first division we may place the names of Mr. Rivington, Mr. Bellamy, Mr. Mitchell Banks, and Mr. Lawson Tait. We have direct evidence of the views entertained by Mr. Rivington and Mr. Lawson Tait: the former gentleman explains by letter to the electorate his line of policy (*vide* THE LANCET of June 21st, p. 1399); the latter has issued an address, which has reached the Fellows by post. Mr. Rivington is a distinguished graduate of the London University; for long he has been a teacher of surgery, and in connexion with the London Hospital and elsewhere has done good work in the profession. He is also a well-informed historian and critic of medical polity and politics. His views on College politics are admirably formulated in the letter referred to above. Mr. Bellamy was for many years a member of the Board of Examiners at the Royal College of Surgeons of England, is a lecturer on surgery and clinical surgery at the Charing-cross Hospital (an institution, by the way, that is wholly unrepresented at the College Council), and is well known as an exponent of surgery and applied anatomy. Mr. Bellamy, from his

experience at the College, is cognisant of and desirous of redressing abuses. Mr. Lawson Tait's reputation as an original investigator and a successful operator is well established. He is a member of the Council of Queen's College and President of Mason College, the two institutions which form the medical school of Birmingham. He maintains that the present effacement of the great body of the corporation of the College of Surgeons is a grievance, and the scanty representation of the provincial Fellows as compared with those of the metropolis is a distinct injustice. From the proceedings of the last general meeting of the Association of Fellows it appears that he would support with Mr. Rivington the present programme of the Association. Mr. Mitchell Banks is a distinguished graduate of the University of Edinburgh, is surgeon to the Liverpool Royal Infirmary, and a representative of the Victoria University in the General Medical Council. His candidature is, we believe, cordially approved by his colleagues in Liverpool, and he is scarcely likely to lack sympathy in the cause of progress and reform. In the second, or stationary, division of candidates seeking suffrages, we must place the names of Mr. R. Brudenell Carter, Mr. Langton, and Mr. Marcus Beck. Here the evidence is positive so far as Mr. Brudenell Carter is concerned, but only inferential in the cases of Mr. Langton and Mr. Marcus Beck. Mr. Brudenell Carter is a Member of the General Medical Council (representing the Society of Apothecaries), an ophthalmic surgeon, and a lecturer on ophthalmic surgery at St. George's Hospital, and a County Councillor for London. Mr. Carter has frequently expressed his views on matters of collegiate reform, and they do not favour any extension of the representative principle or the introduction of a more democratic spirit into the government of the College. Mr. Langton is one of the surgeons at St. Bartholomew's Hospital, and a lecturer on clinical surgery. He has enjoyed office as a member of the Board and of the Court of Examiners at the Royal College of Surgeons for ten years, and has not exhibited any particular zeal in the cause of reform. At the present moment St. Bartholomew's Hospital has three representatives already on the Council. Mr. Marcus Beck graduated at the London University in 1868 with honours. He is one of the surgeons at University College Hospital (which has already two representatives in the Council), and a teacher of surgery in that institution. He has not hitherto manifested any interest whatever, so far as we know, in College politics, and has certainly never identified himself with the cause of liberty and reform. There ought to be little difficulty in arriving at a definite conclusion on the voting questions. Is any Fellow satisfied with the position awarded to him, as a Fellow, in the College of Surgeons? Does the College of Surgeons rank with other colleges in its form of government? Shall the *corporation* of Surgeons continue to be mere dummies in the management and administration of collegiate affairs? At the present election the Fellows alone can answer these questions and express their thoughts by their votes. Those who can say "Aye" to the three questions will vote for the stationary candidates. Those who say "No" will vote for the progressive candidates. Already the number of voting papers applied for exceeds that of last year, and the poll will be taken in the library of the College from two to four in the afternoon of Thursday next.

THE CONVOCATION OF THE UNIVERSITY OF LONDON.

THE special meeting of the members of Convocation on Tuesday last afforded a typical example of how little importance can be placed on the decision of this variable and fluctuating body, unless it is specially summoned for some definite object. Of its enormous number of graduates, no more than sixty or seventy attended the sitting, and the majority of those present were probably attracted more by curiosity as to the result of the election of a Fellow by the Senate than by the other business on the agenda. Yet in these circumstances a resolution was moved by Mr. Tyler which, by insisting that the final examinations for degrees should be the same for all candidates, would have seriously embarrassed the Senate in its negotiations with the teaching colleges, and, if it had been passed and attended to by the Senate, would probably have wrecked the whole scheme, although it only touched one clause of the very large and comprehensive question. For nearly two hours the resolution was debated; one set of speakers urging resistance to the scheme of the Senate, whilst their opponents begged Convocation not to hamper their efforts by passing resolutions which subsequent events might make regrettable. After those graduates who regularly speak on such occasions had at greater or less length given the House the benefit of their advice, a division was taken, when sixteen voted for Mr. Tyler's resolution and thirty-three for the amendment. The Senate now knows the opinions on its policy of 49 out of nearly 3000 graduates. Can anything show more conclusively how futile are these debates in Convocation, or wonder that the Senate treats such resolutions with scant respect? When a definite issue is placed before Convocation its meetings are very interesting and its decisions important; but on other occasions these gatherings degenerate into mere occasions for dull and wearisome talk.

THE REASSESSMENT AND THE LONDON WATER-SUPPLY.

FOR now close upon eighty years the question of the water-supply for the metropolis has been before the public. At times it has given rise to acute anxiety and much agitation; then other topics of interest have come forward and carried the current of public thought in other directions. Still, the water-supply problem, remaining unsettled, soon returned to the fore; and, now that we have a municipality for London, a new and vigorous movement has been set on foot which, it is to be hoped, will prove strong enough to finally settle the question. The initiative is due to Mr. James Beal, of the London County Council, the veteran municipal reformer, aided by the vestry of St. James's. The matter is particularly urgent, for the period is rapidly approaching for the quinquennial reassessment of property in London. As the rate for water is fixed in proportion to the rateable value of the houses supplied, this charge will be raised when the rate is raised, though there will be no increase in the amount of water supplied or extra cost incurred by the companies. This will place in the hands of the companies an immense unearned increment, and already the nominal value of the property of the companies is enormous. It is this which renders all schemes for the purchasing of the companies' rights so difficult to realise. The sum total of capital actually paid up (as mentioned on a previous occasion) only amounts to about £14,000,000, and yet the medium market price of the water companies' shares &c. is estimated at some £30,000,000. During the last sixteen years the increase of capital expended in supplying London with water is equal to 38·5 per cent.; but the income derived from the sale of water has augmented 68·21 per cent. and the profits 78·08 per cent. Now the profits will be still greater—that is to say, water will be very much dearer than at present, if the companies are allowed to profit by the coming quinquennial reassessment to raise proportionately the water rate. The vestry of St. James's, in view of these facts, have convoked a meeting of delegates from all the vestries of London. After some discussion, which showed great unanimity of opinion, though both

political parties were represented, a resolution was carried declaring that the water-supply of London should be placed in the hands of a municipal body representing the metropolis. The second resolution was to the effect "that the Government be requested, in compliance with the foregoing resolution, and in view of the loss to the ratepayers by the quinquennial valuation now in progress permitting an increase of charge to the consumers without an equivalent expenditure of capital, to forthwith introduce a Bill to enable the London County Council to acquire the undertakings of the eight water companies now supplying London, or some of them, by agreement, or, failing agreement, to create a Board of Arbitrators to settle the terms of transfer by compulsory powers, or, failing both, to give powers to establish an independent supply." By a third vote the President of the Local Government Board was requested to receive a deputation from the local authorities of London in support of the above resolution, and Mr. Beal was unanimously elected the spokesman of the deputation. It is not necessary to point out how intimately this question is connected with the health of the metropolis. On a plentiful and cheap water-supply depends the successful operation of our drainage system. No consideration of private profit should be allowed to step in between the public and its water-supply. Many provincial towns have taken over their water-supply, and there is now some hope that their example will be followed by the metropolis.

THE FLORENTINE SCHOOL.

THIS important centre of medical instruction keeps pace with the progress of science and teaching in a manner worthy of its honourable traditions. Like other institutions of Florence, it owes much to the public spirit of leading citizens, one of whom, the Commendatore Egisto Fabbri, has just endowed it with an amphitheatre for clinical surgery which is, in some respects, an improvement on any construction of the kind in Europe. Accommodating comfortably 180 students, it admits of their seeing every detail of the operator's work without rising or moving from their seats. The donor visited all the medical schools of the European universities with a view to making the amphitheatre as perfect as possible; and, having drawn plans of the new features it was to embody, he entrusted the whole to the able architect, Professor Roster, who, with some practical modifications, has carried them out with skill and effect. To appreciate the meritorious details of the construction, it must be visited on days when the more difficult operations are in progress, and then its advantages in point of light, ventilation, and general commodiousness will be apparent. All the flooring and the walls to some seven feet from the ground are of crystal, in large thick plates, so as to minimise all danger of infection; and the halls annexed to the amphitheatre, for the accommodation of the patients on their way to or from operations, for baths, for the *armamentarium chirurgicum*, and for the clinical *personnel*, are well appointed in every way for their purpose. Those of the profession who may visit Florence on an autumnal tour will find the Arcispedale di S. Maria Nuova made doubly attractive by this ingenious and effective adjunct to its clinical architecture.

RURAL DISTRICT NURSING.

THE *Queen* of June 14th contains a thoughtful and practical article on rural district nursing by Lady Victoria Lambton. The difficulties at first encountered, the manner in which they were met, and the lessons learnt in ten years during which this plan has been operative in a district of South Pembrokeshire, are sketched with instructive clearness. A variety of opposing circumstances have on the whole been successfully overcome. The distances traversed in visiting have rendered necessary the use of a pony cart. Costs arising from this and other causes have been met partly by voluntary effort (including collections, bazaar sales, and the like), partly by the payments of poor patients according to a fixed scale. Finally, the reserve native in all rustic populations, in sickness and health alike, has been gradually thawed by the genial influence of kindness and sensible comfort derived from the attentions of the visiting nurse, whose functions combine the care of medical and surgical cases with the offices of the midwife. Though chiefly intended for the poor, her aid has also proved acceptable in wealthier households. This, of course, is satisfactory as a proof of efficiency. At the same time, care will doubtless be observed that such promotion does not unduly curtail the privileges of more needy sufferers. It is understood, also, that the safety of such attentions is guaranteed as far as required by the supervision of a responsible practitioner. Under such conditions no one can refuse to second the wish expressed by the writer, that there should be "a trained nurse in every district." Further information on the same subject is to be found in a small pamphlet entitled "Sick Nursing for Country Folk."[1]

THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

THE annual meeting of this Association was held on June 20th at the residence of Mrs. Bischoffsheim. The Earl of Dysart presided. The chief feature of the year reported was the establishment of two new dispensaries in the East-end of London, for which the Association are largely indebted to Mrs. Bischoffsheim, who had obtained them a grant from Baron Hirsch of £3000. The great want of this and of similar associations is the sympathy of the body of practitioners, who seem to feel that they are not remunerated as they should be under the system. It is impossible to doubt that the promoters wish to serve not only the working classes, but the profession, which by night and day has to be at their call; but they have not yet succeeded in raising the rate of remuneration to a point which makes the appointments satisfactory to the profession.

THE ADULTERATION OF BUTTER.

IF the account which has reached us is correct, a very unfortunate conflict of opinion in regard to the adulteration of butter has recently taken place at Portsmouth. It is said that the local analyst reported that a certain sample was margarine only; the public analyst for Southampton that it was pure, though not of high character: and the Somerset House chemists that it contained not less than 15 per cent. of fat other than butter fat. Judging from previous experience in regard both to butter and milk, we think it highly probable that the three analyses in this case were substantially identical, and that the very grave discrepancies arose in the interpretations put upon them. For butter, milk, and many other articles of food and medicine, there cannot possibly be any absolute standard of purity. No two samples of butter, milk, tea, or opium are alike, nor, for the matter of that, are any two samples of coal. By the present law, the public analyst, without any standard to guide him, is compelled to certify not only to the fact, but also to the extent of any adulteration he may detect. He must therefore select for himself a standard, and must select one which, in his opinion, represents the minimum of possible purity. In regard to milk, a standard is pretty well established. It is founded on the milk sometimes yielded by ill-fed, unhealthy, or over-milked cows, and so affords a cover

[1] London: Sampson Low and Co.

for the skilful watering and skimming of all ordinary milk. Ample advantage of this cover is taken by many a milk-vendor, and the public analyst is often compelled to pass milk which has almost certainly been adulterated. Even this low standard is some protection to the public, as is proved by the numerous convictions obtained on milks which fall below it. In regard to butter the case is different. Standards that seemed satisfactory had been established chiefly through the labours of Messrs. Angell and Hehner, who were the first to devise a satisfactory scheme for analysis. But of late, samples of genuine butter which did not conform to these standards were analysed by Mr. Allen of Sheffield, and since then some confusion has prevailed which has doubtless led to the discrepant opinions given in the Portsmouth case. Even without the new Act of Parliament so urgently required, public analysts will doubtless ere long agree upon a standard which shall be at least as satisfactory as the present milk standard. But in the meantime we cannot wonder that trade journals exult in such apparently contradictory analyses, and that one of them, the *Grocer*, expresses the trader's feeling with regard to the public analyst in such terms as the following:—"Experience does not seem to teach the analysts anything. They differed years ago in their certificates, and they differ just as widely now. There is no dependence to be placed upon them." This is of course a distorted view of the facts, for the English public analysts, most of whom are well-trained and skilful chemists, have done an enormous amount to check the gross commercial frauds which are still prevalent in this as in every other country. The stringency of the French and American codes would scarcely suit the readers of the *Grocer*. Fresh legislation will, we trust, before long increase at once the powers and the efficiency of the public analysts.

COUNTY MEDICAL OFFICERS OF HEALTH.

COUNTY COUNCILS are beginning to appoint medical officers of health, and it may be anticipated that as each county which has made this appointment finds the value of the services of such an officer, others will follow the example. In Scotland two counties, Caithness and Sutherland, have combined for this purpose, and the beginning of a more complete sanitary administration will shortly exist. The county of Zetland, however, has taken a very ill-advised step; instead of considering the nature of the duties which would have to be performed, and of the salary which would be proper remuneration for the services to be rendered, the Zetland County Council has advertised for tenders, applicants being invited to state their qualifications and the salary expected. The Council do not announce whether they will accept the lowest tender, but we may assume from their method of procedure that cheapness will be an important consideration. We feel convinced that no medical man who has any self-respect will respond to such an invitation. Apart from the affront to the medical profession, it is obvious that the public interest cannot possibly be well served by such a system of electing officers. We sincerely trust that the Council will be compelled to reconsider its action, and that it will be sufficiently mindful of its duty to the county to issue another advertisement, and to appoint someone capable of acting as a trustworthy adviser.

CALF-LYMPH VACCINATION.

THE London Society for the Abolition of Compulsory Vaccination has passed a resolution characterising the outcry for calf lymph as absurd and mischievous. This resolution does not cause us surprise. The anti-vaccinationist bases his objection upon the ground that it must be dangerous to use one malady for protection against another. He is unwilling to consider the relative risks of both; it is enough for him that the remedy is itself a malady, however slight. To attempt, therefore, to overcome his objections by offering him the use of calf lymph, and by assuring him that it cannot possibly be a cause of syphilis, is useless; he remains irreconcilable. This is well worth consideration before any step is taken to develop calf-lymph vaccination at the expense of the system which is now in force in this country; whatever arrangements are made, there will always remain some persons who will prefer the risks of small-pox to being vaccinated. The society to which we refer argues that since animals are subject to disease, there is no more ground for expecting immunity by the use of calf lymph than by the use of humanised lymph, that there is no certainty that the calf has not been retro-vaccinated from the human subject and had human diseases communicated to it, and that "an unknown risk is at least as much to be dreaded as a known risk." The society of course passes over the fact that there is ample experience of the amount of risk from the use of humanised and calf lymph, and that whether calf or humanised lymph is used this is so trifling as not to be compared with the dangers of small-pox; but this for them is beside the question. Calf and humanised lymph are alike to be condemned. The lesson which has to be learnt is that they accept no compromise, and the country has to determine whether it will allow itself to follow their teaching and submit to the inevitable small-pox which results from its acceptance, or continue to practise vaccination with such precautions as are necessary to avoid unfavourable results.

LEPROSY IN COLUMBIA.

Dr. NAVARRO communicates an interesting note to the *Revista Médica de Bogota* regarding the contagion of leprosy. A leper who was married to a healthy woman had two boys by her, one of whom showed signs of the disease at the age of one month and the other at the age of two months. A lady (leper) took two healthy persons into her service, and before a year had elapsed both had become lepers. Another lady (leper) engaged a healthy man as butler, who contracted the disease and died from it before the lady herself. A healthy gentleman married a lady leper, and at the end of three months he himself showed symptoms of the disease and was sent to the lazaretto. Dr. Navarro has met with several cases where the parents of lepers have been gouty.

THE NATIONAL SOCIETY FOR PREVENTION OF CRUELTY TO CHILDREN.

THE sixth year of work done by the National Society for the Prevention of Cruelty to Children has just reached its close, and its results are embodied in the annual report published last month. From a perusal of this pamphlet we find that the Society is placed in a somewhat anomalous though not an undesirable position, and that it comes before the public prospering, though complaining. Like other charitable bodies it stands in need of funds; but this fact is in its way satisfactory, since it is a consequence of the ever-widening influence of the Society and the fuller powers conferred upon it by the Act of August, 1889. Its growth has been attended by a corresponding advance both as regards its income and its place in public favour. In its first year the former amounted to £903, and the subscribers numbered 225. Last year the money total reached £8860, and the membership was 1700. During the six years arrangements have been made for the welfare of some 10,628 children, of whom 7122 belong to last year's list. So great an accession of work obviously entails a largely increased expenditure, to cover which the committee have appealed, not without confidence, to the sympathy

and good sense of their fellow countrymen. As regards the work itself, this is fairly well understood from the terms of the Act, which we have repeatedly discussed in former issues. Among other points worth noting is the conviction expressed in this report and founded on experience, that cruelty can be put down by such efforts as those put forth by the Society. The offender, once convicted and punished, is less ready to transgress in future. Conviction, however, though successful in a very large proportion—88 per cent. of the cases taken into court—is not desired where it can with any degree of safety be dispensed with. Happily, it is enough as a rule to warn defaulting guardians in order to ensure their better behaviour. This fact in itself should help to confirm public confidence in the motives and methods applied by the officers of the Society. There are likewise other matters connected with the farming of nurse children and the system of infant insurance which have occupied the particular attention of the committee. With regard to these, their propositions are very reasonable. Of such and many more details of interest contained in this report we cannot now speak at length, but a full statement on the subject will be found within its pages, and is worthy of more than a cursory survey.

BUCOLIC ESTIMATE OF THE VALUE OF PUBLIC HEALTH SERVICES.

IT is interesting to observe the view which some local sanitary authorities entertain as to the desirability of making the services of the county medical officer of health available in their districts in accordance with the provisions of the Local Government Act. The Pershore Rural Sanitary Authority recently discussed this question, and came to the conclusion that it was better to reappoint their own officers, a member explaining that if they did not do so "they would be playing into the hands of the County Council." Judged by the report of a local journal, not a single word was said as to the relative efficiency of one or the other arrangement. The chief question discussed was as to whether they could not appoint their officers at less salary than they had previously received. The chairman maintained that the salaries should be continued as before, at an annual stipend, which it is worth recording was £20 for each district. At the next meeting, therefore, the board were to discuss whether this sum should be given, or whether £15 was not adequate remuneration. Apparently the thought did not enter the minds of the guardians that this might be the best way of playing into the hands of the County Council. It is by such circumstances that the need for the District Council Bill will be made apparent to all.

HEREDITARY CHOREA IN ADULTS.

DR. BERNATSKI reports in a Polish medical journal a case occurring in the Warsaw University Clinic of the so-called "Huntington's chorea," or chronic hereditary St. Vitus's dance in adults. According to the accounts of it given in medical literature, it is an extremely rare affection, appearing in adults and being complicated with mental disturbance. It is hereditary, whole families being affected by it. Irregular incoördinate movements appear first in the facial muscles, and afterwards spread to those of the upper extremities and of the trunk. These movements become arrested or diminished during voluntary movements, this constituting, according to Landois, a pathognomonic symptom distinguishing the affection from St. Vitus's dance as described by Sydenham. The majority of authors who mention the disease describe it as incurable. Dr. Bernatski's patient was a man of forty-eight years of age, a shoemaker by trade, who, when admitted, had been suffering from choreic movements for five years. His mother and his maternal grandfather had been similarly affected. The movements occurred in the head, face, the upper extremities, and in the trunk. At first bromide of potassium was prescribed to the amount of sixty-two grains per diem. This, however, was quite useless, the movements continuing as before. Liquor arsenicalis—that is, of course the Russian one, which is stronger than that in the British Pharmacopœia, in the ratio of 6 to 5—was then ordered; six drops per diem were given at first, being gradually increased until ten drops daily were taken. After four days of this treatment there was some perceptible improvement, and by the eleventh or twelfth day the involuntary movements had very nearly ceased, the fingers only showing signs of them. It would, therefore, appear that arsenic is indicated in this disease, and affords some hope of cure. The patient referred to left the hospital and was not seen again.

TYPHOID FEVER AT MILAN.

THE laudable endeavours of the municipality of Milan to make the sanitary record of the city commensurate with its position as the richest and most interprising of Italian industrial centres have again broken down—this time in the populous quarter of the Porta di Genova. Typhoid fever has declared itself in that neighbourhood with a severity far exceeding its normal limit, the cases being much in excess of the chronically high average. Sewage-polluted water has already, in the opinion of the medical authorities, been traced as the local cause of the outbreak, and energetic measures are being enforced to remedy the evil at its source. Milan, with its growing population, must have some purer water-supply than that of wells sunk in the outsoil of the plain in which it stands. Why not accede to the wish expressed by the most enlightened of its citizens, and seconded by the ablest of its sanitary engineers, and make an aqueduct between the city and the adjacent Alps, so as to bring water in purity and abundance from a source in every sense above suspicion? Under the ancient Roman *régime* such an undertaking would have been carried out with military despatch and efficiency, and in modern Italy similar enterprises have once and again been successfully brought to completion. Milan owes it to itself, as the leading commercial city in the peninsula, and as a great *entrepôt* of the travelling world, to make its hygienic apparatus equal, if not superior, to that of its less affluent neighbours.

THE EFFECT OF SENSORY AND PSYCHICAL STIMULATION ON THE TEMPERATURE OF THE CEREBRAL HEMISPHERES.

SOME very interesting experiments on this subject have recently been made, in the laboratory of Professor Schiff, by M. Dorta, a full account of which he has recently published. He first of all points out the fallacies which beset the methods employed by Corso, Musso, Tanzi, and Lombard, who estimated the temperature by placing their instruments in contact with either the scalp or the pia mater. Dorta, following the method employed by Schiff in 1870, passed one couple of a thermo-electric apparatus into the substance of one cerebral hemisphere at about its middle point, while the other was placed in the middle ear. In the thermo-electric circuit was placed a very delicate galvanometer. The effects of the anæsthetic having been allowed to pass off, the position of the needle was carefully noted. The sensory stimuli employed were all mechanical, such as pinching the skin and nostrils, touching the conjunctiva, and so on. In all cases such stimulation was followed by a deflection of the galvanometer, indicating a rise of temperature in the brain substance. A point of great interest which the author observed was that, at all

events in newly born animals, after death, when the motor nerves had lost their excitability, a *sensory* peripheral irritation would still produce thermal changes in the cerebral hemispheres. Psychical stimuli were also employed in the form of terrifying noises &c., and a similar rise of temperature took place. The experiments are most carefully and minutely recorded, but there is hardly sufficient evidence given to show that the rise of temperature is directly due to the sensory stimulation. The needles in all cases appear to have been inserted in the neighbourhood of the motor region of the brain, and M. Dorta does not seem to have excluded the explanation that the rise of temperature may have been due to voluntary attempts at movement on the part of the animal. The difficulties in the way of an investigation of this kind are no doubt extremely great, but it is to be hoped that M. Dorta will make his interesting investigation more complete by inserting the thermo-electric needles into more than one place during each experiment, so as to determine whether the rise of temperature he has demonstrated affects the whole cerebrum or is localised in any part.

EPSOM COLLEGE.

THE successes of the students of Epsom College at the matriculation and preliminary scientific examinations at the University of London for years past have been most creditable to their teaching. The head master has lately invited all boys proposing to enter the profession of medicine by other avenues than the London Matriculation and the M.B. degree, which is beyond the powers of many, to receive while remaining at the College advantages similar to those which are given in the preliminary scientific form to those who have succeeded in matriculating. They are taught chemistry and physics, subjects of serious difficulty to lads of moderate ability when first away from school control, and are aided in the study of elementary physiology and biology—subjects regularly included in the teaching in the College curriculum. This will enable students to pass the first examination of the conjoint board at the earliest possible date after entry at a hospital. This action on the part of the authorities of Epsom College commands our warm approval.

We learn that Mr. Montgomery, the Senior Prefect of Epsom College, has just been elected by his fellow students to the Wakley Scholarship. Mr. Montgomery has won his way to the head of the school by good honest work. For some time past he has regularly taken the meteorological observations at the College each night and morning. His reports have been so painstaking and accurate as to have received the commendation of the Meteorological Society.

We may take this opportunity of mentioning that the name of Dr. Frederick Taylor was accidentally omitted from the list of gentlemen composing the Council appointed by the College to consider how best to raise £50,000 for the benefit of the Epsom pensioners.

LEPROSY AND SYPHILIS.

WE have received an interesting communication from Archdeacon Wright, evoked by the recent article by Sir W. Moore (THE LANCET, May 17th), and contending against the opinion expressed therein that "leprosy is a phase of inherited syphilis." Our correspondent not only points to the marked anatomical differences, but asserts that we have no proof whatever that syphilis was known until the fourteenth century. With respect to the description of Susruta, referred to by Sir W. Moore, Mr. Wright avers that the fact that his work was written in Sanscrit is no proof of its antiquity, and that research has shown that that author lived some centuries after the great writers of the Augustan age. "The fact is," he goes on to say, "we really know little or nothing of the story of medical science in the East. We may assert that the Hindoos did not get their knowledge from the Greeks, for no Eastern medical *savant* has a name with a foreign sound; and further, the weights and measures used were those used in Magadha or in Calinga—i.e., in the eastern provinces. This is clear; still, it gives us no information as to the time when Hindoo medical teachers lived. Under these circumstances, we know nothing of Susruta earlier than about the seventh century A.D. That the Hindoos had made an advance in medicine long before that time we may believe, as in the days of Charaka and Susruta they were advanced in dietetics and on the origin and diagnosis of disease, in surgery (they taught us rhinoplasty), in the medicinal property of minerals (especially precious stones and metals), in knowledge of plants and substances, in chemical analysis and materia medica. With all this progress, which none can deny, there was, as I have stated, no chronology, and we cannot, after a fair, honest scrutiny, give Susruta an earlier date than the seventh century A.D." He refers to Weber, "The History of Indian Literature," pp. 265-271, and "Dictionnaire Encyclopédique des Sciences Médicales," Art. "Susruta," by Dr. Liétard.

POPULAR REMEDIES FOR HYDROPHOBIA.

AN evening contemporary on the 23rd inst. made the following statement respecting certain cases of hydrophobia: "At Ashton-under-Lyne Infirmary last night, James Saxon, aged thirteen, died of hydrophobia. On Jan. 28th he was bitten in the hand at Stalybridge by a large hound dog, and the animal afterwards ran on to Newton, near Hyde, where it attacked a child and bit two men. The latter three have been treated by M. Pasteur, and have apparently recovered. The deceased was treated by the Chief Constable of Clitheroe, who claims to have a remedy for the disease." Now, without any desire to institute unfair comparisons, and admitting even that there is still a possibility for the development of symptoms in the remaining cases, it is but right to observe that the fatal case was treated on a method which a short time since received the *imprimatur* of the Town Council of Heywood. We commented on that strange proceeding at the time (*vide* THE LANCET, p. 980), and fear that faith in the so-called "remedy" may be likely to lead to further disasters in the future, unless the above-quoted record may have a salutary deterrent effect on those who are inclined to prefer its employment to that of the method which we owe to Pasteur.

A WANT IN ABERDEEN UNIVERSITY.

IN presiding at the annual competition of the Aberdeen University Swimming Club last week, Professor Struthers spoke of what he considered a serious want for the students of the University—a "Students' Union." That had already been well provided for in the Universities of Edinburgh and Glasgow. For Glasgow, a former student, Dr. McIntyre of Odiham, had handsomely given a sum of £5000 for the purpose, and a substantial and commodious building had been provided for that sum. Dr. Struthers begged to mention that as a hint to any former student of Aberdeen who had prospered in the world and who desired to do a kind and useful thing to future generations of Aberdeen students. In four years the fourth centenary of the University would fall to be celebrated, and by that time it was to be hoped that a permanent building for the purpose would be provided. But he trusted that next winter session would see a beginning made in temporary premises. What is wanted is a commodious reading-room supplied with papers and periodicals, a committee-room, where the Students' Representative Council, a body about to be in-

corporated under the recent Universities Act, could hold their meetings, and where the various students' clubs could meet, and other rooms for social recreation. This meant some subscriptions in the first place for hiring and fitting up the rooms. Such a union is the more needed in Aberdeen as the Colleges are at some distance from each other, and it would be the means of enabling the students of all the faculties to meet and get to know each other, and enjoy together some of those social advantages that have been rather wanting in the Scottish University life.

AID FOR DEEP-SEA FISHERMEN.

THE genuine concern with which the interests of our fishermen are regarded by their countrymen on shore was fittingly attested by the crowded meeting of their well-wishers lately held in Exeter Hall. The Lord Chancellor and other gentlemen who spoke on this occasion had no difficulty in showing that the claims of the Deep-sea Mission deserve solid recognition. The Society is not now, indeed, a poor and struggling one. During its eight years of existence its means and its friends have both increased, and it is now in the enjoyment of an annual income of £20,000. During this period, however, its work has prospered in an equal, if not a greater, degree; and it comes before the public, in consequence, embarrassed and impoverished by its riches of duty, occasion, effort, and success—a beggar with no need to be ashamed. Most of our readers have some knowledge of its past history, but the statement of a few details may still be interesting. Among the marks of its success may be noted the fact that there are now ten mission smacks in active operation. The value of the service rendered by these can hardly be overestimated. Not only do they represent a very great increase in social and moral advantages—the constant privilege of the landsman, and almost equally rare in the fisher's life at sea—but their usefulness to the sick and hurt is no less notable. On the sea there is no lack of opportunity for the exercise of ambulance aid, and yeoman service of this kind is well discharged by the mission skippers and their men; while the floating hospitals provide shelter and a higher skill for the treatment of more serious cases. Nor has the Society been less active in the cause of sanitation. Thanks to its efforts, those dog-fish of the fleets, the "coper" vessels, no longer infest the North Sea and thrive upon the havoc wrought by drink. In short, within a few years a body of men capable in every way of much that is good, but virtually cast adrift from almost every social privilege, have been brought back into the life and brotherhood of their fellows. This is the work of the Deep-sea Fishermen's Mission. No further description should be required in order to show that here, at any rate, a liberal hand will not err in giving help.

DIPHTHERIA IN PADDINGTON.

THE subject of diphtheria in Paddington deserves comment from two points of view. In the first place, it is alleged by the parent of one of those attacked that the cause of the fatal mischief lies in the water supplied at the Paddington Recreation Ground. The evidence adduced as to this is certainly somewhat striking at first sight; for it is alleged that of twelve schoolboys who went to the Recreation Ground on a certain day, seven drank ginger-beer &c. and remain well, whereas the remaining five partook of water, and they all sickened and died. Such a circumstance deserves full investigation; but standing alone it has no very great significance. Thus hundreds may have drunk the same water and have suffered no harm, whereas some of the schoolfellows of the five boys who died may have had undefined sorethroat which, though it escaped attention at the time, may yet have led to the onset of diphtheria in the school. Many points of this sort would have to be fully inquired into before the water could properly be held to have induced the disease. But, on the other hand, the publication of the chemical ingredients of the water, together with a general reference to the absence of animalculæ, affords absolutely no evidence that the specific infection of diphtheria could not have been contained in the water. Hence it is much to be hoped that the investigation which the vestry propose to make will be an exhaustive one. As yet there is no information before the public which justifies an opinion as to the cause of this diphtheria, although it may be stated generally that such outbreaks of diphtheria as have been thoroughly investigated by experts have never as yet been satisfactorily traced to polluted water-supplies. But there is a second point. It has been contended that the Recreation Ground occurrence is a merely isolated one; that Paddington is much neglected in the matter of the removal of stable manure and refuse, and that a number of cases which, if not definite diphtheria, are at least suspicious throat attacks, have occurred in the parish, and in connexion with this it is pointed out that just at the moment when compulsory notification has for the first time supplied information as to the extent of such an evil, the vestry has discontinued publishing the periodic returns of the medical officer of health. This is a matter which calls for some explanation, for, whilst it must be remembered that the names and addresses of those suffering from infectious diseases are required under the statute to be sent only to the medical officer of health in order that no undue publicity should occur, the ratepayers as a body are entitled to have a periodic summary account of the amount of preventable disease prevailing in the districts in which they reside.

THE DEGENERATION CAUSED BY PHOSPHORUS POISONING.

DR. NATHANSON, in a Berlin graduation thesis, discusses the effect of phosphorus poisoning on the liver. He follows Virchow in drawing a sharp distinction between the infiltration of the liver cells by fat globules and their metamorphosis into fat. He treated hardened sections with ether and found that when these were from a healthy subject no change was produced thereby; when they were from a liver affected with fatty infiltration, the fat globules were dissolved, the remaining cell structure remaining pretty much as it had been before. When, however, the sections were taken from bodies which had died of phosphorus poisoning, the structure was entirely obliterated by the ether, and the same occurred in the case of sections of the kidneys from the same subjects. The inference is that poisoning by phosphorus produces a true fatty metamorphosis of the tissues of the liver and kidney.

HÆMATEMESIS IN A NEW-BORN INFANT.

MR. H. C. HODGES of Watton has published the notes of a case, under the care of his father, of hæmatemesis in a new-born child. The child, after a perfectly natural and easy labour, was born at 5 A.M. At 11 A.M. a very urgent message came that the child had hæmorrhage. It was found to be blanched and the pulse very feeble, and the clothes were saturated with bright blood which had been vomited. Absolute quiet was enjoined, and ten minims of hazeline every two hours were ordered. There was no more hæmorrhage, but about a tablespoonful of blood-stained mucus was vomited at 5.30 P.M. Hiccough had been constant since the morning. There was also one rather copious evacuation of blood, besides meconium. The next day the hiccough was less. There was a slight serous discharge from the left ear, and subconjunctival hæmorrhage

of the left eye. On the second day after birth there was internal strabismus of the left eye. After the third day the symptoms rapidly disappeared and the child got quite well. Mr. Hodges was disposed to think that there had been some injury to the vessels at the base of the skull.

HONOUR TO JOHN HOWARD.

AT the great Congress for Prison Reform just concluded at St. Petersburg, one of the most successful sittings was the second, at which the distinguished Crown lawyer, M. Spassowitsch, delivered an address on the two philanthropists of the eighteenth century—John Howard and the Italian Beccaria, both of them beneficent innovators in the treatment of the criminal classes. The address, from the interest of its subject and the reputation of M. Spassowitsch as one of the most brilliant orators of the Russian bar, attracted a numerous audience, which included many of the leading figures in St. Petersburg society. Referring to the fact that one hundred years ago John Howard closed the beautiful pilgrimage of his life on Russian soil, and left all that was mortal of him in the neighbourhood of Cherson, M. Spassowitsch drew a striking picture of the philanthropist's last resting-place, on which stand a sundial and tablet, the latter bearing in Latin the touching inscription: "Whoever thou mayst be, thou standest at the grave of thy friend." Then followed a vivid sketch of Howard's career, with all its incidents, often romantic, ever redounding to his honour; and finally, a comparison of the reforms he initiated and brought to completion with those projected, in part successfully, by the Italian jurist Beccaria. The concluding words of the address were these: "I would fain have contented myself with pronouncing the name of this one philanthropist only, the English Howard, but I was unable to do so, for ever in my thoughts live the two benefactors of mankind, who are inseparable. Honour and fame be rendered to the glorious pair, the authors of the criminal reform of the eighteenth century, John Howard and Beccaria. Honour and fame to the peoples whose virtues are personified in them, the Saxon and the Latin. Honour and fame to the nations from which both have sprung. Long live England; long live Italy!" The rounds of applause with which these words were received attested how fully they had interpreted the unanimous feeling of the Congress; and in the evening at the State banquet, at which the chief authorities of Russia, civil and military, were represented, toasts were given and acknowledged in the spirit which, earlier in the day, had found such genial expression in the address of M. Spassowitsch.

THE HEALTH OF WOKING.

THE parish of Woking has made application for certain urban powers over thirteen streets which are presumably near the station, and a Local Government Board inquiry has been held as to the matter. The need for the powers cannot be denied, for the state of the so-called streets is simply disgraceful; indeed, as the vicar put it, children cannot even get to and from school without being subjected to unhealthy conditions. But the application in question only touches the fringe of the needs of this district. The neighbourhood of Woking has deservedly acquired a high reputation for healthiness; but this is in part due to certain qualities of soil which if misused are liable to return evil for evil. It is an excellent thing to live on the porous London tertiary beds; it is another thing to aggregate dwellings together by the hundreds, and to pour all the liquid filth of the inhabitants into that same porous soil. Woking would do well to be warned in time; its present practices cannot be continued with impunity, and when the natural consequences of the present neglect ensue, the damage done will not be of short duration. Even the pecuniary considerations of property holders, which are now held up as a serious bar to progress, will be gravely affected.

INTERNATIONAL HYGIENIC CONGRESS.

THE Lord Mayor has issued invitations for a public meeting to be held at the Mansion House on July 3rd, on behalf of the International Hygienic Congress, which will be held next year in London. Similar congresses have been held in different continental cities, the last at Vienna, under the presidency of the late Crown Prince of Austria. Already the Universities, the Colleges of Physicians and Surgeons, and the various learned societies have appointed delegates, and a large representative committee is being formed for making the necessary arrangements. The Congress itself will be presided over by the Prince of Wales. We sincerely trust that the Lord Mayor will be well supported, and that every effort will be made to give a cordial welcome to the many distinguished foreigners who will attend on the occasion of the Congress is held.

THE EFFECTS OF BAGPIPE PLAYING ON THE TEETH.

MR. MACLEOD, at a meeting of the Odonto-Chirurgical Society, said that, having his attention drawn by a single case, he has been led to examine the teeth of various pipers, and all of them presented "wearing away" of the cutting edges of the six front teeth, in a greater or lesser degree, varying with the density of the tooth structure and the time engaged in pipe playing. He found on inquiry that, on the average, it took about four years to make a well-marked impression, but that once the enamel edge was worn through the "wearing away" was more rapid. Everyone was aware of the way in which the tobacco-pipe wore the teeth of the smoker, but this was not to be wondered at, the baked pipeclay being a hard and gritty substance, but that a horn mouth-piece should have such appreciable effect was, he thought, a matter of curious interest. He might mention, however, that the mouth-pieces suffered more than the teeth, the average life of a horn mouth-piece being twelve to eighteen months, that of a bone or ivory one being about two years. The peculiarity noticed was a crescent-shaped aperture on the cutting edge of the front teeth in three localities—viz., between the central incisors and between the lateral and canine on both sides. Mr. Macleod offers no explanation, but might one not be found in the friction caused by the constant movement of the mouth-piece during playing?

THE PROGRESS OF CHOLERA IN EUROPE.

THE indications that cholera was subsiding in Spain, to which we referred last week, have been maintained, and it is evident that, apart from some comparatively trivial extensions to fresh villages, the disease has for the moment very materially subsided. Both in Puebla de Rugat and in Montechelvo the new cases have been but few, and the cases which have occurred in neighbouring villages have not, as yet, been followed by any material diffusion of the disease. It yet remains to be seen whether, with the advent of warmer weather, this state of affairs will be maintained, or whether a further extension of cholera will occur. The Medical Commission appointed by the Government to investigate the circumstances of the outbreak have returned to Madrid, and they have reported that the disease is true cholera, a fact which was very generally known to everyone else some ten days ago; and on the strength of this diagnosis, the Commissioners were submitted to some process of fumigation before re-entering the capital, a

process which we assume was, in their case, undergone rather with a view to allay public fear than because of any belief in its efficacy on the part of those who submitted themselves to it. One rather interesting phase of the outbreak is to be found in the instructions issued to the prefects in France by M. Constans, Minister of the Interior. French technical experts have long set their faces against land quarantines as useless, but they have hardly been able to get their views carried out. But, on this occasion, the Minister of the Interior has been advised, and has decided to carry out, along the Franco-Spanish frontier, a system essentially resembling our English coast arrangements. In other words, persons entering France from Spain are to be subjected to medical inspection; if they are suffering from cholera they will be put under isolation; if they are suspected of incubating the disease or of having an ailment that may turn out to be cholera, they will be detained for a while; but persons who are healthy will be at once allowed to pass with a so-called "sanitary passport," their names and addresses being sent on to the mayors of the Communes to which they are going, in order that they may be kept under surveillance for a few days. This is a great step in advance of regulations formerly adopted in France, and it is to be hoped that, in the interests of public health, it may find imitators amongst other quarantining nations, and that it may especially take the place of the muskets and other weapons which have formed a cordon around certain parts of Valencia during the past few weeks.

MEDICO-LEGAL OBJECTIONS TO EMBALMING IN THE UNITED STATES.

ATTENTION has recently been drawn in transatlantic contemporaries to the difficulties which the present fashion of having bodies roughly embalmed shortly after death throws in the way of any toxicological inquiry as to the cause of death. It appears to be the custom for the undertaker, very soon after the breath has left the body, to pour into the mouth and into the chief cavities a quantity of a strong solution of arsenic and corrosive sublimate, to delay decomposition. It is already evident that the medico-legal objection is not merely a theoretical one. In a recent number of the *Boston Medical and Surgical Journal* a physician mentions a case in which a young married woman died with symptoms which were held to point to arsenical poisoning. Unfortunately, none of the vomited matters had been saved, and before a post-mortem examination was made and the viscera handed over to an analyst, the undertaker had, as a matter of routine, introduced a large quantity of preserving fluid containing arsenic into the body, so that the analyst's examination and report were entirely valueless. It seems likely that measures will be taken to prevent this method of embalming until an unequivocal certificate as to the cause of death has been given by the medical man in charge of the case.

MEDICINE IN COLUMBIA.

IN a *résumé* of the more important papers that have been read before the Bogota Medical and Natural Science Society, the identity of leprosy with the "Mal de San Antonio" has been discussed, with the expression of a generally affirmative opinion. Dr. Prados has described his success in treating alcoholic cirrhosis of the liver with iodide of potassium, milk, and jaborandi. Dr. Carrasquilla seeks to show that leprosy is not hereditary, but contagious. Drs. Castañeda and Borda presented an interesting account of experiments on "chemical vaccination" for yellow fever, a notice of which has already appeared in THE LANCET. Dr. Manrique gave an account of a case in which, by means of Alexander's operation, he had restored an invalid woman to active life, no return to her former condition having taken place, though two years had elapsed since the operation. Dr. Garcia Medina reported some very obstinate cases of ulcerative keratitis, which had yielded to collyria of antipyrin in distilled water.

ANNUAL DINNER OF THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

THE eighth annual dinner of this Society took place at the Criterion Restaurant on June 11th, the President, Dr. Campbell Pope, occupying the chair. There was a numerous attendance, and a very enjoyable evening was spent, the proceedings being enlivened by a selection of music performed by members of the Savage Club, who kindly volunteered their services.

EASTBOURNE AND ITS LODGING-HOUSES.

THE Corporation of Eastbourne are about to establish a system by which certificates will be granted to lodging-house proprietors to the effect that their premises are in a satisfactory condition. The plan will be a boon to the public if it is efficiently organised; but everything will depend on the completeness of the inspection on which the certificate is based, on the competence of the official granting it, and, above all, on the periodic repetition of the inspection, in order to see that the conditions which are essential to wholesomeness of lodgment are properly maintained. A somewhat similar plan has already been organised in one or two other seaside resorts, such as Scarborough, and it is likely to be one that will find somewhat wide extension if it gets the credit of securing that at which it professedly aims—namely, security to the public against preventable disease.

PENNY ICES.

MANY years have now elapsed since we published a special report on the Italian colony of Saffron-hill. Here it is that the penny ice dealers and the organ-grinders congregate, and great are the sanitary difficulties which their presence occasions. Poor, extremely frugal, and dirty, they overcrowd the dwellings they occupy, and cannot at all understand our laws of decency and hygiene. On many occasions some alarm has been caused by rumours concerning the poisonous nature of the material used to colour the cheap ices sold in the streets. We inquired into this question with some care, and found that, though aniline dyes were employed, the quantity required was so minute that no harm could ensue. On the other hand, there is a real risk from these cheap ices. This danger does not arise from the material with which they are made, but from the places where the ices are mixed. For instance, our commissioners described a very small room in which there were four beds occupied by three married couples and one single man. Penny ices were made in the filthiest hovels and close to open drains. Since then there have been great improvements effected in the quarter, but the habits of these Italians remain much the same. A few days ago this fact was rendered unpleasantly evident before the Wandsworth Police-court. The police inspector, in giving evidence, reported that he found an Italian family—the father and mother with six children—occupying a miserably furnished room. There were also a cat, a dog, a monkey, and several white mice. Of course a horrible stench pervaded the room, and yet under the bed were found all the appliances for making penny ices. When we remember that eggs and milk are employed in preparing ices, it will be understood how easily they may be contaminated by such foul surroundings. That edibles should not be made and stored in overcrowded, dirty private rooms is evident enough, though it is not so easy to say how this can be prevented. This result may, however, be attained

if, as proposed, the 69th clause of the Factory Act is abrogated. The principle should be that where things are made to be publicly sold privacy ceases; the public have a right of control and of entry, and the Factory and Sanitary Acts should be enforced with due rigour. This principle is all the more essential where the objects manufactured, such as clothes and articles of food, are especially susceptible of absorbing and conveying the germs of disease. If the law is amended in this sense these itinerant Italians would no longer be able to make ices in their dirty overcrowded bedrooms; but would have to combine so as to hire jointly some special place, or a portion of a market, where they could make their ices in a pure atmosphere and with cleanly surroundings.

UNKNOWN CAUSES OF DEATH.

DR. CAMERON did good service on the 19th inst. in again calling the attention of the Government to the imperfections of the present system for recording the causes of death in this country, and to the facilities that are thus afforded for the concealment of crime and criminal neglect. He pointed out in questions addressed to the President of the Local Government Board that, according to the last report of the Registrar-General, the causes of 25,132 of the deaths registered in England and Wales during the year 1888 were classed as "ill-defined or not specified," and that the causes of 15,747 of the deaths in that year were not certified either by a registered medical practitioner or by a coroner. He asked whether the Government, in face of these facts, would consent to the appointment of a select committee to inquire into the sufficiency of the existing law as a means of detecting "poison, violence, and criminal neglect." The form of Dr. Cameron's question seemed to suggest that the 25,132 cases of "ill-defined or not specified" cause were all duly certified, and were additional to the 15,747 uncertified causes of death. In point of fact, the "ill-defined and not specified" cases included undoubtedly a considerable proportion of the uncertified cases; while, on the other hand, in a very large proportion of the 15,747 uncertified cases the cause of death was returned in such a way as to make it possible to class the deaths under well-defined headings. The fact, however, still remains that the defects of the present system arise from two causes: the inability or omission of registered medical practitioners to assign a definite cause to the deaths of patients who have been attended during their last illness, and the acceptance as satisfactory of mere statements of the cause of death of persons who either die without any medical attendance or who in their last illness are attended by unqualified or unregistered practitioners. Considering the general progress that has been made in public health during the last twenty years, it is seriously to be regretted that this matter of unknown and uncertified causes of death has been practically left untouched, and its settlement is therefore still more urgently needed now than it was when so often pressed upon the public notice by the late Dr. William Farr during his connexion with the Registrar-General's Department.

INTERNATIONAL MEDICAL CONGRESS.

THE English and Dutch railway companies concerned in the route to Berlin, *vid* Queenborough and Flushing, announce a reduction of fares to all members of the Congress taking return tickets. To obtain this concession it is necessary that intending members should forward the fee of £1 to Dr. Max Bartels, Berlin, S.W., Leipzigerstrasse 75, so that they may receive their tickets of membership beforehand. First-class tickets will cost £6 16*s.*; second-class £4 19*s.* For those wishing to extend their stay in Germany beyond thirty days a so-called circular ticket may be obtained at three or four days' notice, which will be available for forty-five or sixty days. These tickets may be obtained through Messrs. Brasch and Rothenstein, 1, New Basinghall-street, E.C.; or Messrs. Thomas Cook and Son, Ludgate-circus, E.C. Messrs. Cook and Son have in course of preparation a special circular containing information regarding routes &c., both for the Congress and the meeting of the British Medical Association at Birmingham.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Paul Silex, who has for about six years past been Professor Schweigger's assistant in the Berlin University Clinic for Diseases of the Eye, has established himself as a private lecturer on Ophthalmology in Berlin. The subject of his opening lecture was the Treatment of Chronic Diseases of the Lacrymal Sac.

Buda Pesth.—Dr. Thanhoffer has been appointed to the chair of Descriptive and Topographical Anatomy. Dr. Lanfenauer has been promoted to the rank of an ordinary Professor, with the understanding that he is to teach the pathology and therapeutics of nervous diseases.

French Provincial Medical Faculties.—Answers have now been received from most of the provincial faculties regarding the question of separating the science examination for medical students from that of science students, and the general opinion is decidedly in favour of the new scheme.

Vienna.—Professor Kahler's clinic is being superintended by his assistant, Dr. Krauss, during the absence of the professor, who is suffering from polyneuritis. Professor Zuckerkandl has been elected Dean of the Medical Faculty.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Soret, Professor of Physics in Geneva.—Dr. Heerwagen, a Russian Court Councillor.—Dr. Zimmler, Sanitary Councillor of Sarstedt, Prussia.

H.R.H DUKE KARL THEODOR, M.D., whose philanthropic labours as an oculist among the Tyrolese poor we have more than one noticed, happened to be consulted by a patient from the Dutch Indies residing for the season at Meran. The case was one of very advanced eye disease, involving almost total loss of vision, but so successful was the treatment that the patient, in gratitude for the restoration of his sight, prevailed on the "Duke Doctor" to have his bust modelled by the sculptor Steiner. This work, a *chef-d'œuvre* of the artist, having been reproduced in bronze at Vienna, has been sent to Java to occupy a conspicuous place in the Dutch gentleman's villa.

THE Triennial Astley Cooper Prize of £300 for the best essay on "The Origin, Anatomy, Results, and Treatment of Tubercular Diseases of Bones and Joints" has been awarded to Mr. William Watson Cheyne, M.B., C.M. Edin., F.R.C.S.

THE Council of Queen's College, Birmingham, have appointed Professor Windle, M.A., M.D., to be Dean of the Medical Faculty. This post, now revived, has been for a number of years in abeyance. The Council have also decided to appoint a lecturer in Public Health.

SYDENHAM DISTRICT MEDICAL SOCIETY.—The annual meeting of this Society was held at the Crystal Palace on June 19th. Twenty-three were present at the dinner. On this occasion, in addition to previous grants, twenty guineas were voted to the "Pensioners' Permanent Endowment Fund" at Epsom College and ten guineas to the British Medical Benevolent Fund.

UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.

THE special meeting of Convocation to "nominate a list of three persons to be submitted to Her Majesty for the selection therefrom of a Fellow of the University" took place on the 24th inst. The labour of scrutinising the votes was unusually arduous, but the result was declared before 7 o'clock. It was as follows:—

Sir Philip Magnus, B.A., B.Sc.	990
John Syer Bristowe, F.R.S., M.D.	626
Alfred William Bennett, M.A., B.Sc.	274
Michael Francis O'Reilly, D.Sc.	180

The CHAIRMAN (Dr. F. J. Wood), at the opening of the proceedings, alluded to the course which would probably be pursued with regard to the Draft Charter. He had learnt that it would probably not be submitted to Convocation until it had been put into formal shape. It was, however, open to members of Convocation to call a special meeting to discuss the details of the proposed Charter so soon as the text of this appeared on the confirmed minutes of the Senate.

Dr. W. J. COLLINS asked if the "Revised Scheme" published in THE LANCET was authentic.

The CHAIRMAN pointed out that such publication was unauthorised. No scheme appeared on the confirmed minutes, and it would be unwise to rely upon that publication as being the scheme adopted by the Senate, which was still engaged in considering the subject.

In reply to Mr. Bennett, the CHAIRMAN stated that the Charter could not be granted by the Crown unless it had been accepted by Convocation.

Mr. TYLER, M.A., moved: "That, in the opinion of this House, the decision of the University for London Commission, that the final examination for degrees should be the same for all candidates, wherever educated, is worthy of hearty approval, and that the proposal to confer London degrees after two, or possibly many, differing examinations, would impair or even destroy the value of these degrees, and would cause such division and disintegration as would render the very name of 'university' no longer suitable." He reviewed the attempts made by Convocation to obtain a reconstitution of the University since 1877, and maintained that the present movement was an endeavour to come to the relief of University and King's Colleges, which of late years had been declining, owing to the abolition of tests at Oxford and Cambridge, and the activity of the provincial colleges. He warned the University that it might itself be swamped if it went to the rescue of these bodies. Sir G. Young had been the moving spirit in the matter, and his first plan had been to form a sort of dual University, the parts of which were to be linked together like the Siamese twins. The Albert University scheme was felt to imperil the existing University, for its degrees would be confounded with those of the latter. The Royal Commission, which had too limited a mandate, recommended in the thirty-fourth clause of its report that the final examinations for degrees should be in the hands of the University. (In his opinion—the speaker's—matriculation at least should have been included in this recommendation.) But it was also recommended that the Senate, together with Convocation, should prepare a scheme of reconstitution *in accordance with* the recommendations of the Commission. The revised scheme (as it appears in THE LANCET) goes full in the face of that recommendation. If that principle were departed from the degrees must be lowered in value. And as a matter of fact, Sir G. Young has expressed a wish that the degrees in Arts and Medicine should be lowered. For whereas the average age of the graduates had risen (for B.A. it was now twenty-six), there was a wish to enable much younger men to graduate. The union of professors and examiners in the degree examinations would seriously diminish the value of the degrees. The reputation of the University rested upon its high standard for the pass degrees, and this would be fatally influenced if the revised scheme were adopted. The Professors of University and King's Colleges would have immense influence in the Senate, and an independent examiner would not stand much chance of prevailing. The University would be divided and disorganised by these collegiate examinations, and there would be no longer any *esprit de corps* between graduates. It was a serious crisis upon which the University was entering, and although he did not like to counsel resistance to the Senate, he would resist such proposals as had appeared, even to the point of rejection of the Charter.

Mr. LYNN, B.A., seconded the resolution. He attacked the policy of the Senate, the whole object of which was to lower the London degree.

Mr. SILVANUS THOMPSON, D.Sc., moved as an amendment: "To leave out after the word 'That' all the words of the resolution, and to insert the following: 'This House, though extremely desirous not to embarrass the Senate in its efforts to arrive at a satisfactory solution of the problem of reconstitution, hereby expresses the strong opinion that it ought to be consulted as to the scheme of reconstitution before that scheme is finally embodied in a Draft of a new Charter.'" He said there had been innumerable schemes, both of Convocation and the Senate, and lastly one in THE LANCET, which they were told was premature, unauthorised, and which might perhaps prove to be wholly fictitious, perhaps only existing in the imagination of the Editors of that journal! Probably next week another "scheme" would be promulgated. Surely the Senate would not be so ill-advised as to attempt to force through the House a scheme when it was too late to review its details. Convocation should have the opportunity of reviewing the scheme before the Charter was drafted. This would be the constitutional procedure.

Mr. NESBITT, M.A., seconded the amendment.

Dr. COLLINS said the ruling of the chairman—viz., that the amendment was in order—placed many in a dilemma, since they agreed with both the resolution and the amendment. It was high time that the House should discuss the subject, and, for his part, he trusted that the scheme published in THE LANCET was wholly fictitious. He had been unable to obtain a copy of this "revised scheme," and complained strongly that the "man in the street" had been put in possession of information withheld from graduates, who were most vitally concerned. He commented upon certain radical alterations made on the previous "scheme" whereby Convocation was deprived of powers in the selection of constituent colleges, &c. The Senate had not invited any conference with the special committee of Convocation since its reappointment, but had conferred with outside bodies. Thus the direction of the Royal Commission was set aside, which distinctly contemplated the coöperation of the Senate and Convocation.

Mr. ROBERTS, D.Sc., supported the amendment, urging that the subject matter of the resolution would naturally fall for discussion when the scheme was before the House.

Mr. SPRATLING, B.Sc., supported the resolution, claiming the right of Convocation to be heard on the matter. Unless fair opportunity were given for its discussion, he, for one, would say "No" to the Charter.

Sir P. MAGNUS pressed for the withdrawal of the motion, since its subject would be better discussed when the whole scheme was before Convocation, which it would be wise policy of the Senate to confide in.

Mr. TYLER having replied, a division was taken, when there voted for the amendment 33, for the original resolution 16.

Mr. SPRATLING attempted to move another amendment, comprising the reintroduction of the first paragraph of Mr. Tyler's resolution, but this was ruled out of order.

Dr. Thompson's amendment was then put as a substantive resolution and carried.

Mr. TYLER then moved: "That the purpose of the founders of this University that its powers and privileges should eventually be the same as those of the Universities of Oxford and Cambridge requires to be kept steadily in view in arranging any scheme of reform or reconstitution, and that, in conformity with this purpose, there should be an avoidance of any provisions which may place great or predominant power in the hands of persons who are not graduates of this University.

This was seconded by Mr. LYNN, and carried by a small majority.

KILMARNOCK INFIRMARY.—At a meeting of the directors of the infirmary this week, a letter was read from the Dowager Lady Howard de Walden, lady of the manor, offering £1200 for the erection of a children's ward in the infirmary, on the condition that the board carry out the erection of the ward on plans approved by her ladyship. The directors decided to accept the offer.

RESULTS OF LEGISLATION ON CONTAGIOUS DISEASES IN BRUSSELS.

THE appalling increase of disease in the British army which has followed closely upon the abolition of the Contagious Diseases Act, and the sanitary regulations formerly applied at the Indian military cantonments, force this unpleasant subject once more upon us. Nor are we alone in this matter. The sentimental arguments which have carried the day in England have crossed the Channel, and are taken up by a portion of the clerical party and for political purposes in Belgium. There is now some talk of abolishing the rules that have contributed so materially to maintain the order of the streets and the health of the population of Brussels.

Anyone who visits Brussels to-day will be impressed by the quietude of the streets and the absence of soliciting; and he may walk about without incurring the risk of being molested, and escapes witnessing such scenes as daily disgrace the streets of London. The reason of this difference is not far to seek. At the Sanitary Bureau the prostitutes of Brussels are kept under strict control. A large map of the town may be seen studded with red, black, and yellow pins. The black indicate the situation of the "houses of tolerance," the red indicate the residences of women who, by paying a certain fee, undergo regular medical examination at their own homes, and the yellow pins indicate the dwellings of the women who go to the dispensary, which has been specially built for this purpose, and where they are periodically examined. Great efforts are made to prevent more than one woman lodging in one house, and to abolish houses of call where women may come and go without residing. In this manner the scandal, the disputes, and riots that used to occur, when loose women congregated together or met in houses where they did not reside have been abolished. Every woman has her own home, which is well known and well watched by the police, so that if anything occurs—a theft, or disturbance, or irregularity in attending at the medical examination—the woman who is at fault can at once be found.

The results attained by this careful control are shown by the following statistics for 1889, which have not yet been published. Among the women examined in their own houses there was not a single case of venereal disease out of a thousand visits. In the public brothels the proportion of cases for 1000 medical examinations was 1·2; and of those women who live in lodgings, but come to be examined at the dispensary, there were 2 cases in the 1000 examinations. In contrast with these very favourable figures, it should be noted that during the same year, of the new arrivals among the women inscribed as prostitutes, of 1000 examinations there were 43·3 cases of venereal diseases. Finally, among the clandestine prostitutes who had previously escaped all medical control, 1000 examinations revealed no less than 207·5 cases of venereal disease. It may therefore be said that with free or clandestine prostitution, venereal disease is two hundredfold more frequent than where legislation is strictly applied. The statistics from Paris are not so satisfactory, but they give an average of ten years, and of course, in a large town like Paris, the control is not so easily exercised. The average for 1000 examinations during the ten years from 1878 to 1887 was for women inscribed but at large, 3·12 cases of syphilis and 3·06 non-syphilitic; total 6·18 cases of venereal diseases. For women in the State-regulated brothels, 2·70 cases of syphilis and 2·52 non-syphilitic; total 5·22 venereal diseases. Among the women not inscribed—that is, among the clandestine prostitutes—there were in 1000 examinations, 166 cases of syphilis discovered. Of the women inscribed who were arrested, of 1000 examinations there were 23·96 cases of syphilis and 19·44 non-syphilitic; total 38·42 cases of venereal disease. The statistics before us do not state why these women were arrested, but presumably the majority had failed to come up for medical examination, though such women also often get into trouble through frequenting certain streets at other than the prescribed hours. These figures demonstrate beyond all cavil the immense good achieved by the strict application of legislation. This in itself ought to suffice for our purpose. We have to indicate the existence of the evil; to prescribe a remedy, and prove its efficacy. This has been done over and over again, and now the new figures we give serve to clinch once more well-ascertained facts.

The nature of the above statistics, carefully prepared, demonstrate very powerfully this one fact—that it is absolutely preposterous to speak of abolishing prostitution without first dealing with the question of the wages women are able to earn when they are desirous of leading a virtuous life. When in Brussels a woman presents herself to be inscribed as a prostitute, efforts are always made to dissuade her from such a course. If she is under age, the police communicate with her parents or guardians, or with the husband if the woman is married. Should these efforts fail, the rules and regulations to which she will have to submit are carefully read to her, and then the statistical card is drawn up. At the top is the space for the name, and this is cut off and destroyed should the woman at any future time cease to be a prostitute, while the details of the case remain for statistical purposes. The date and place of her birth are then inscribed, whether legitimate or illegitimate, and the degree of education. The card further states whether the woman is single, a widow or married, what was her previous trade or occupation, how long she has been a prostitute, whether she has had any children; if so, what is their age; and, finally, what is the alleged cause or reason for becoming a prostitute. It is this last question which is especially interesting. Taking a period of twenty years, from 1865 to 1884, it will be found that 3505 women were inscribed as prostitutes at Brussels. Out of this number 1523 explained that extreme poverty was the cause of their degradation; 1118 frankly confessed that their sexual passions were the cause; 420 attributed their fall to evil company; 316 said they were disgusted and weary of their work, because the toil was so arduous and the pay so small; 101 had been abandoned by their lovers; 10 had quarrelled with their parents; 7 were abandoned by their husbands; 4 did not agree with their guardians; 3 had family quarrels; 2 were compelled to prostitute themselves by their husbands, and 1 by her parents. The Burgomaster of Brussels, in dealing with these figures, officially reports that it is impossible to answer these women. If they are told to work the majority will answer eagerly that they would be only too glad to work if work could be found them. Many, however, do not know any trade, and those who can work find the wages so low and the competition so keen that they cannot earn a livelihood. This competition is rendered all the more severe by the work done in convents and similar religious institutions, where young girls are made to sew &c. for long hours, and the results of their industry flood the markets. As these children are not obliged to earn enough to keep themselves, what they produce gluts the market, and brings the wages of independent workers down to the starvation point. Hence prostitution becomes in too many cases not merely a temptation, but a hard, irresistible necessity. Nevertheless, the fact that prostitution as regulated is submitted to a severe control makes many women hesitate on the threshold of vice. In England this is not so. The proportion of prostitutes is consequently infinitely greater, and not only is disease, but vice, far more prevalent in, for instance, London than in Brussels or Paris.

As already stated, we should prefer to argue the case from the purely medical or sanitary point of view; but it is not viewed in that light by our legislators. Dr. Jansen, at Brussels, argues that he does not see why he should be allowed to proceed against a person who exposes himself while suffering from scarlet fever, and yet allow a woman, by the very nature of her daily occupation, to spread syphilis on all sides. But he is told that the State regulation of prostitution encourages vice. To this he answers that so far as the women are concerned it is poverty which creates, which renders necessary, much of the vice; but that the prevalence of vice is decidedly checked and not encouraged by State regulation. In England, a workwoman who occasionally prostitutes herself has nothing to fear. By going to a quarter where she is not known, and observing a few precautions, she may not even lose her character for respectability. The temptation, therefore, in moments of distress is very great, especially to married women. This sort of occasional prostitution, unfortunately too common in England, is extremely difficult in Brussels or Paris. The women who resort to this expe-

dient to overcome a temporary financial difficulty run great risk of being arrested. Then what they thought to do in secret becomes public. How many workmen and others are there in England who think their daughters perfectly virtuous when in reality they are little better than common prostitutes? This could not be if a Contagious Diseases Act was strictly applied. Therefore it is argued that the Act has a very strong deterrent effect, and many thousands of poor women and girls have remained virtuous where they would have occasionally transgressed but for the fear of falling under the law regulating prostitution. As prostitution cannot be abolished, at least till such time as the causes of prostitution are removed, it is best to so regulate the evil as to reduce its injurious consequences to a minimum. Let the social reformer and the religious teacher do what they can to lessen the prevalence of prostitution, and if possible to abolish it altogether; but, while it continues to exist, it is the duty of those who legislate for the preservation of public health to enforce the measures best calculated to check the spread of venereal as well as of the other contagious diseases.

MORTALITY OF CORNISH MINERS.

WITH reference to the varying rates of mortality among different classes of miners we recently called attention to evidence of the remarkably high death-rates prevailing among Cornish miners, a subject which deserves more notice than it has yet received. In speaking of Cornish miners, it should be pointed out that they are practically tin miners, since the proportion engaged in lead and copper mining is comparatively insignificant. In dealing with this subject in the Registrar-General's Supplement to the Forty-fifth Annual Report, Dr. Ogle showed that what he calls the comparative mortality figure for Cornish miners was 1839, whereas among the various groups of coal miners it ranged from 734 in Derbyshire and Nottinghamshire to 1081 in Monmouthshire and South Wales, the mean figure in the six coalfields being 886. That this excess is a special result of the occupation in mines may safely be inferred from the fact that the comparative mortality figure for all males in Cornwall is stated to be 887, and less than half the figure for Cornish miners; whereas, on the other hand, the mortality of coal miners is almost invariably below that of all males at the same ages in the several coal-mining areas. How far the increased rate of mortality among Cornish miners between 1860–62 and 1880–82 can be explained by the fact that Cornish mining is a decaying occupation, causing the healthiest and most vigorous of the miners to emigrate and seek employment in other places, may be open to doubt; but the unhealthiness of mining in Cornwall is urged by Dr. Ogle to be unquestionable, and it may be noted that more than thirty years ago the contrast between the effect of coal and metal mining upon health was dwelt upon by Dr. Greenhow, who wrote in 1858, "Whilst lead and copper and tin mining are certainly dangerous to health, coal mining appears to be at least not unhealthy." It is shown that nearly two-thirds of the mortality of Cornish miners is attributed to phthisis and diseases of the respiratory organs, and that practically the same proportion marked their mortality in 1849–53 and in 1860–62. The mortality from most of the other classes of disease shows an excess compared either with that prevailing among coal-miners or among all males in Cornwall; but the excess is far less marked than that from diseases of the respiratory organs and phthisis. It is specially noted that the mortality of Cornish miners shows no excess from alcoholism or its consequences, a fact which was recognised by the Royal Commissioners who inquired into the condition of miners, who reported in 1864 that "as a class they [Cornish miners] are well-conducted and temperate; large numbers have taken the pledge and kept it, and whatever may be the cause of the diseases to which they are liable, the habit of intoxication cannot be assigned as one of them." The mortality from accident among Cornish miners falls far short of that of other miners, and even of that of quarrymen or of fishermen. In dealing with the comparative mortality from phthisis and diseases of the respiratory organs of males engaged in certain dust-producing occupations, Dr. Ogle throws some further light upon the remarkable mortality from these diseases among Cornish miners. The comparative mortality of these diseases in the aggregate, which among fishermen is only 198, is 328 among coal-miners, and steadily rises in the various dust-producing occupations to 760 among cutlers, 783 among file-makers, 1118 among those engaged in earthenware manufacture, and to 1148 among Cornish miners. Taking phthisis separately, the range of comparative mortality is from 108 among fishermen and 126 among coal-miners, to 473 among earthenware manufacturers and 690 among Cornish miners. The range of comparative mortality from diseases of the respiratory organs, exclusive of phthisis, is from 90 among fishermen to 458 among Cornish miners and 645 among earthenware manufacturers. Compared with coal-miners, the mortality of Cornish miners from phthisis is nearly six times, and from other diseases of the respiratory organs is more than twice as high; and the mortality of the two headings combined is nearly four times as high among Cornish miners as among coal-miners. As the time is now approaching when the statistics of another ten years will be available for the study of occupational mortality, it is to be hoped that the opportunity will not be missed for further investigation of the remarkable contrast between the mortality, especially from phthisis, of coal-miners and of Cornish miners. If dust be, as appears probable, one of the main controlling elements of phthisis mortality, it becomes more than interesting to seek some explanation of the apparent harmlessness (or even of its possible beneficent effect), of coal dust, in contrast with the specially maleficent result of the dust to which Cornish miners are exposed.

PROPHYLACTIC MEASURES AGAINST CHOLERA IN ITALY.

THROUGH the courtesy of the Italian Home Office we are enabled to give the decree issued by Signor Crispi (Premier of Italy and Minister of the Interior) on the measures to be enforced against a possible invasion of cholera.

"Article I. All ships proceeding from the Spanish ports of the Mediterranean shall be subjected to a rigorous medical visitation.

"Article II. From the said ships shall be forbidden the disembarkation of linen and woollen fabrics, whether of personal or of domestic use, which have not been thoroughly cleansed.

"Article III. Pursuant to such regulation, the harbour officials, on finding on board the said ships uncleansed linen or woollen fabrics, shall not allow them to be disembarked unless they shall previously have been properly disinfected, either by means of the water-vapour apparatus, if the ship or harbour be provided with the same; or, if not, by keeping the fabrics in question for ten minutes at least under boiling water or for half an hour in the appropriate solution of corrosive sublimate (2 per 1000).

"Article IV. The medical officers charged with the visitations on board ship shall judge, in individual cases, whether or not they shall also subject to the disinfecting process the personal effects of the passengers or crews.

"Article V. The ships on which, during the passage, cases of cholera have declared themselves, or which, on arrival in port, shall present suspected cases of the said disease, shall be sent to the sanitary station of Asinara, there to undergo those measures *in contumaciam* (*misure contumaciali*) which from time to time shall be determined by the Home Office.

"The prefects of the maritime provinces of the kingdom, the seafaring officials (*capitanerie*) and the harbour officers of the various seaports, are charged with the execution of the present regulations.

"Rome, June 18th, 1890." "CRISPI, *Minister*.

The powers vested in the Italian Home Office to issue the above decree are given by the "law of the 22nd December, 1888, for the safeguard of the public health."

STAFFORDSHIRE GENERAL INFIRMARY. — The Executive Committee of the hospital met on Saturday and formally accepted the Earl of Shrewsbury and Talbot's generous offer of a site at the Lammascotes for the erection of a new infirmary.

THE GRAND PRIORY OF THE ORDER OF THE HOSPITAL OF ST. JOHN OF JERUSALEM IN ENGLAND.

BY permission of Her Majesty the Queen, the Sovereign Head and Patron of the Order, the Members and Associates of the Order held their annual commemoration services at the Chapel Royal, Savoy, on Tuesday, it being the festival of St. John the Baptist. The service took place at eleven o'clock, the sermon being preached by the Bishop of Ely, one of the chaplains of the Order. Subsequently the Members and Associates lunched together at the Albion Tavern, where there was a large gathering; and in the afternoon a general assembly was held at the Chancery of the Order, St. John's Gate, Clerkenwell, when reports were read, all of which showed a very marked and gratifying extension in the various charitable and hospitaller works of the Order.

Amongst those present were Sir Edmund Lechmere, Bart. (Chancellor of the Order, who presided), Lady Lechmere, Mr. John Furley (Director of Ambulance Department), Mrs. Furley, Sir John and Lady St. George, Lieutenant-Colonel Dalton, Miss Dalton, Earl of Winchilsea and Nottingham, Major-General Whitworth Porter and Mrs. Whitworth Porter, Mr. R. Gofton Salmond, Mr. W. A. Tyssen Amherst (Secretary-General of the Order), Mrs. Tyssen Amherst and Miss Margaret Tyssen Amherst, Viscount Templetown, Mr. R. Brudenell Carter, F.R.C.S. (Honorary Consulting Surgeon, British Ophthalmic Hospital, Jerusalem), Sir Andrew Fairbairn, Sir Francis G. M. Boileau, Bart., Major Sir O'Bryen Hoare, Bart., Dr. Farquharson, M.P., Sir Raylton Dixon, Major Domvile, Major-General Astley Terry, Sir Edward Sieveking, Miss Topping, Miss Caulfeild, Miss Bridges, Mrs. Duncan, Dr. E. Freshfield (Receiver-General of the Order), Bishop of Gibraltar, Bishop of Ely, Mr. E. Hanson Freshfield, Mr. and Mrs. Reynolds Rowe, Rev. T. W. Wood, Sir Vincent and Lady Kennett Barrington, Rear-Admiral Bythesea, V.C., Rev. Paul Wyatt, Mr. E. Walford, Miss Fullagar, Miss Evelegh, Mr. W. H. Platt, L.R.C.P.Edin., Mr. J. R. Crease, F.R.C.S.Edin., Rev. E. Josselyn Beck, Lieut.-Colonel Sir H. C. Perrot, Bart. (Chief Secretary, Ambulance Department), Colonel James Rankin, Deputy Inspector-General Matthew Coates, R.N., Fleet-Surgeon H. C. Woods, R.N., Mr. James Story, Mr. Thomas Wakley, F.R.C.S., Miss Duncombe, Mr. J. H. Easterbrook (Assistant Secretary and Almoner of the Order), Rev. C. J. Martyn, Mr. John M. Cook, Mr. Charles Knott, M.R.C.P.Edin., Mr. J. H. Hooper, Colonel Carr, Mr. J. H. Ogilvie, Mr. David Reid, Colonel B. M. Dawes, Mr. E. Izod, Mr. F. P. Fellows, and Mr. Chaley Fox.

THE SERVICES.

AT an examination held at Minbu, Upper Burmah, on Feb. 22nd, 1890, Surgeon Vere Edward Hunter, Medical Staff, passed in Burmese by the higher standard.

ADMIRALTY.—The following appointments have been made:—Surgeons: W. Slaughter to the *Landrail*, and Walter H. S. Stalkartt to the *Ajax* (both dated June 21st, 1890).

VOLUNTEER INFANTRY BRIGADES.—Glasgow Brigade: The following Officer is transferred from the Clyde Brigade:—Surgeon and Surgeon-Major J. Dunlop, M.D., Brigade Surgeon (dated June 21st, 1890).

VOLUNTEER CORPS.—*Rifle:* 3rd Volunteer Battalion, the South Wales Borderers: Acting Surgeon J. W. Davies to be Surgeon (dated June 21st, 1890).—3rd (Dumfries) Volunteer Battalion, the King's Own Scottish Borderers: Surgeon W. J. Carlyle, M.D., resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the Battalion on his retirement (dated June 21st, 1890).—1st Volunteer Battalion, the East Lancashire Regiment: William Wallers, Gent., to be Acting Surgeon (dated June 21st, 1890).

METROPOLITAN HOSPITAL SUNDAY FUND, 1890.

WE publish below further returns of the sums collected at various places of public worship on Sunday, June 8th, in aid of the Metropolitan Hospital Fund. The amount to hand is now £36,500.

Church of England.	1889. £ s. d.	1890. £ s. d.
St. Paul's, Kilburn, Rev. Dr. Bon. Hunt		40 1 0
All Saints', Margaret-street		65 5 3
St. Andrew's, Fulham, Rev. J. H. Cardwell	37 2 6	55 11 0
All Saints' and St. Peter's, Child's-hill		25 1 10
St. Anne's, Tollington-park, Rev. W. H. Chambers, D.D.	20 13 6	24 5 5
Woodford Parish Church and Mission, Rev. A. Hughes	23 10 0	26 3 6
St. Paul's School (Colet Chapel)		20 14 4
Emmanuel Ref. Episcopal Church, Gunnersbury		27 8 0
St. Mary's, Willesden, Ven. Archd. Atlay	33 6 1	29 11 0
Clapham Parish Church, Rev. C. P. Greene	56 8 8	65 7 9
St. Agnes', Kennington-park		24 14 7
Royal Military Chapel, Wellington Barracks		43 10 10
St. Matthew's, Redhill, Rev. H. Brass	33 10 9	21 7 3
All Saints', Clapham-park, Rev. A. G. Girdlestone	77 0 3	47 3 1
Christ Church, Chislehurst, Rev. W. Fleming	51 16 0	57 4 7
All Saints', Putney-common, Rev. Hon. R. Henley	43 0 0	46 0 0
St. Luke's, Chelsea, Rev. G. Blunt	45 10 0	48 15 0
Christ Church, Beckenham, Rev. J. Harding	48 1 2	40 0 1
Brunswick Chapel, Upper Berkeley-st.		30 1 9
St. Michael's, Stockwell		30 11 0
Christ Church, Lee, Rev. L. A. Smith, M.A.	31 18 3	39 4 0
St. Dunstan's, East Acton, Rev. T. Miller Hayter	40 11 3	34 3 0
St. Mary's, Spring Grove		20 0 0
Holy Trinity, Islington, Rev. W. E. Haigh	38 13 6	22 15 3
Kingston Parish Church (proportion), Rev. A. S. W. Young	20 0 0	20 0 0
St. Jude's, West Brixton, Rev. R. Ransford	55 12 9	69 4 7
Wandsworth Parish Church and Holy Trinity, Rev. W. Reed	76 10 0	67 10 0
St. John the Baptist's, Kingston Vale, Rev. C. Sanderson	26 2 3	32 1 0
Christ Church, North Brixton, Rev. Canon Hussey, D.D.	57 0 0	51 3 9
St. Mark's, Regent's-park		23 10 0
St. James's, Clapham-park, Rev. F. Lillingston	70 5 0	87 10 7
St. John's, Red Lion-square		29 7 8
St. Augustin's, Highbury, Rev. Preb. Gordon Calthorp	79 14 4	65 10 4
St. John the Baptist, Leytonstone, Rev. W. J. Bettison	24 10 10	23 12 0
St. Mary Magdalene, Paddington, Rev. Richd. T. West, D.D.	75 14 9	56 8 3
St. John the Evangelist, Brixton, Rev. C. Rashleigh Cooke	29 15 7	33 7 11
St. John the Evangelist, Penge		74 5 10
St. Mary's, Aldermanbury, Walbrook		80 6 8
Presbyterian.		
Islington, Rev. J. T. Davidson, D.D.	32 0 0	32 11 0
Baptist.		
Central Hill, Baptist, Upper Norwood, Rev. S. A. Tipple	22 15 1	30 10 4
Various.		
Wanstead (Friends)		60 10 4
Donations.		
Reid & Co. (a further)	200 0 0	R. H. N. 30 0 0

NATIONAL ASSOCIATION OF SANITARY INSPECTORS.

A meeting of this Association was recently held in Leeds, under the presidency of Mr. Pridgin Teale, who, in his opening address, enlarged upon the possibilities which lay before the organisation for work in the interests of sanitary inspectors, and expressed the opinion that in time it would become a powerful piece of machinery, by which the broad question of public policy would hereafter be brought before the Legislature with much greater effect. There was no prospect, from what he could hear, of the Government putting into a Bill a plan for the superannuation of sanitary inspectors. Therefore it remained for the inspectors themselves to initiate and work out the plan, and then at some future time Government, seeing that it was the right thing to do, might be induced to give some help. Mr. C. C. Smith, of Skipton, read a paper on "Some of the Public Health Acts, and their defects from the sanitary inspector's point of view." Mr. Wilkinson of Derby also read a paper on "House Drainage—a Duty Neglected."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Enteric Fever at Pemberton, by Mr. J. SPEAR.—This report is principally interesting from the fact that the outbreak was, in the main, specially localised in the district, and from the circumstance that two sets of causes seem to have come into operation in its production. Lamberhead-green was the locality mainly involved, and it seems clear that some comparatively isolated occurrences of enteric fever in July were distinct in point of causation from a sudden exacerbation of the disease in August. In considering the earlier attacks in two different areas, we gather that Mr. Spear is inclined to attribute them partly to the fact that the localities lay at the highest points of two different sets of sewers, which were both ill ventilated and ill flushed, but even more so to the existence of the foul midden-privy system which lent itself so easily to the diffusion of the infection. But a special cause came into operation towards the close of July which led to a subsequent outburst, and this appears to have been the annual fair. The patients attacked were nearly all children, who had almost without exception partaken of two articles of diet at this fair—namely, pease-pudding and ginger beer; and it transpired that both these were actually made in a room where a boy was lying ill of enteric fever, the articles being within his reach during the day time, and being transferred at night to a scullery adjoining and ventilated from the sick chamber. This conclusion is only come to after other conditions calculated to lead to the spread of this disease are found to be capable of being set aside. Reference having been made to the salient features of the outbreak, the fact is recalled that nine years ago a very similar outbreak occurred. The facts of this previous outbreak are contrasted, by means of type in parallel lines, and it is found that they coincide in a very remarkable way with the story of the 1889 outbreak. Just as in the latter case, so in 1880, a few odd cases were followed by a sudden outbreak attacking children, and the onset of the epidemic prevalence bore precisely the same relation, in point of date, to the annual fair, as had transpired on the occasion of last year's outbreak. This circumstance makes the occurrence the more interesting; and the facts may well be utilised to secure from the authority such action as shall remove from their district causes which lead to the occurrence of attacks of this preventable disease.

Enteric Fever at Cowpen, by Dr. PARSONS.—The Cowpen urban district in Northumberland is obtaining an unenviable notoriety for enteric fever, and the inspection on which this report is based is the third made since 1883 by the medical department of the Local Government Board. The death-rate from fever, which has been essentially enteric fever, has ever since 1873 greatly exceeded the mean for England and Wales; and between 1883–89, whereas the latter rate has been 2·2, that for Cowpen has been no less than 11·5 per 10,000 living. The disease has also been somewhat continuous, but it has exhibited epidemic occurrences, as in January, 1884, November, 1884, the spring of 1886, June, 1887, and again in the latter half of 1889. Each of these epidemics is discussed, attention being especially directed to the last outbreak, which was mainly limited to a locality known as Bebside. The sanitary state of this place is stated to be very defective; the surface of the streets and yards is unmade, and deep in mud; the sewers and drains are commonly blocked up; the water-supply is extremely unsatisfactory, both as to quantity and quality, and it became very difficult to assign the onset of the disease to any one out of these many faulty conditions. But, granting its first occurrence, whether by importation or otherwise, the state of Bebside is declared to be well fitted for its spread. Special attention was directed during the inquiry to the varying water-supply of the place; and as regards one supply—namely, from a colliery—Dr. Parson's expresses himself astonished that anyone can suppose it to be fit for human use as delivered, an expression of opinion evidently referring to the views of the chairman of the local board, who is stated to have held that the supply was "a perfectly suitable one." The defects still attaching to Cowpen are dealt with in a series of recommendations as to future action, and amongst these reference is made to the need for some means of isolating cases of infectious diseases, a matter that has frequently been urged on the authority by their own medical officer of health. Speaking of the general death-rate of Cowpen, it would seem, if the population be truly estimated, to vary between 19 and 20 per 1000 living, a rate distinctly in excess of that which should prevail in a district of some 11,000 people. But no error as to population can affect the large amount of infant death-rate, children under one year of age dying at a rate of no less than 19·5 per 100 births; a rate which indicates culpable waste of infant life.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Handsworth Urban District.—Extensive sewerage operations alluded to in former reports have been continued, and at the same time there has been a steady extension of building and growth of population in the district. The general death-rate is given by Dr. Welch as 13·2 per 1000, and the mean of a recent group of years contrasts favourably in this respect with that for antecedent periods. The deaths under one year are 13·4 per cent. of the births. In dealing with deaths under five years it is pointed out that an excess in 1889 was due to scarlatina and whooping-cough, nearly all the deaths from these two causes taking place under that age. There has for some years past been a system of voluntary notification of infectious diseases, and a hospital is also available; indeed, care is taken both to control and remove the causes of such diseases in the district. Lately, measures have been taken to abolish the midden-privy, and we are now told that the authority pass no plans for new buildings except there is, in addition to an ashpit, also a watercloset. This action as to a special form of closet cannot, of course, be taken under any general statute, but Handsworth may have acquired special powers in the matter. Well-closing is steadily in progress, and the general water-supply is now derived from the public mains. Good sanitary supervision is also maintained.

Willesden Urban District.—After making such allowance as appears called for on account of increase of population, Dr. D. S. Skinner feels justified in calculating the general death-rate of this suburban district as 12·0 per 1000 only during 1889; and this small general mortality has coincided with a low zymotic rate of death. Reference is made to certain inspections of the sewage farm, the river Brent, &c.; and whilst there is not much information as to the general sanitary circumstances of the district, inspection of cow-sheds, dairies, &c., and inquiries on complaint seem to be regularly attended to. The question of hospital provision moves very slowly in this district, and one almost begins to fear that Willesden will, before this matter is settled, run the risk of having its name for healthiness materially damaged for a series of years by reason of its failure to make proper provision for promptly dealing with those cases concerning which it has professed a desire to have prompt information by a system of notification. It is to be hoped that Dr. Skinner's recommendations as to this will receive more attention than that accorded to his predecessor in office.

Bacup Urban District.—Dr. J. Brown, after urging the adoption of the compulsory system of disease notification, proceeds to consider the incidence of infectious diseases on the district. As to diphtheria, he says it is now several years since a death was registered; but in his mortality list we notice that last year there were nine deaths from croup, and it is not stated whether these were of the membranous or the spasmodic type. The causes of certain infectious and other diseases are dealt with at some length, but croup is not referred to in this sense. Scavenging work and drainage seem to be progressing, and lead poisoning by drinking water is receiving attention. Unfortunately as yet the only remedy is to remove the lead pipes, and to this apparently must local action be largely limited until it is discovered why waters at times suddenly acquire and then again lose the power of taking up lead. But, as pointed out, even this remedial measure is hindered by the absence of power to regulate a material for supply pipes. The general death rate was 17 per 1000, the lowest hitherto recorded.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5698 births and 3334 deaths were registered during the week ending June 21st. The annual rate of mortality in these towns, which had been 18·0 and 17·2 per 1000 in the preceding two weeks, rose again last week to 17·9. The rate was 16·4 in London and 19·2 in the twenty-seven provincial towns. During the first twelve weeks of the current quarter the death-rate in the twenty-eight towns averaged 19·2 per 1000, and was 0·9 below the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 11·8 in Brighton, 12·6 in Nottingham, 13·7 in Bristol, and 14·3 in Cardiff. The rates in the other towns ranged upwards to 23·9 in Bolton, 24·4 in Sheffield, 25·6 in Newcastle-upon-Tyne, and 29·0 in Manchester. The deaths referred to the principal zymotic diseases, which had been 405 and 401 in the preceding two weeks, rose again last week to 462; they included 172 from measles, 99 from whooping-cough, 65 from scarlet fever, 57 from diarrhœa, 35 from "fever" (principally enteric), 32 from diphtheria, and 2 from small-pox. The lowest death-rates from these diseases were recorded in Huddersfield, Halifax, Brighton, Portsmouth, and Oldham, and the highest rates in Plymouth, Birmingham, Liverpool, and Derby. The greatest mortality from measles occurred in London, Plymouth, Derby, Liverpool, and Birmingham; from scarlet fever in Birkenhead, Manchester, and Liverpool; from whooping-cough in Derby; and from "fever" in Plymouth. Of the 32 deaths from diphtheria, 19 occurred in London, 3 in Derby, 3 in Salford, and 2 in Liverpool. Small-pox caused one death in Derby, and one in Hull. Seven cases of small-pox were under treatment in the Metropolitan Asylum Hospitals at the end of the week, and not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1196, against numbers increasing from 1067 to 1153 on the preceding four Saturdays; the new cases admitted during the week were 143, against 141 and 104 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 229 and 240 in the preceding two weeks, declined to 215 last week, but slightly exceeded the corrected average. The causes of 65, or 2·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Wolverhampton, Leeds, and in three smaller towns. The largest proportions of uncertified deaths were recorded in Newcastle-on-Tyne, Huddersfield, Liverpool, and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding three weeks from 23·3 to 19·9 per 1000, rose again to 22·1 in the week ending June 21st, and exceeded by 4·2 the rate which prevailed during the same period in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 15·6 in Perth and 16·9 in Edinburgh, to 24·7 in Dundee and 25·8 in Glasgow. The 572 deaths in the eight towns exceeded the number in the previous week by 56, and included 41 which were referred to measles, 37 to whooping-cough, 6 to scarlet fever, 5 to diarrhœa, 4 to diphtheria, 2 to "fever," and not one to small-pox. In all, 95 deaths resulted from these principal zymotic diseases, against 97 and 93 in the preceding two weeks. These deaths were equal to an annual rate of 3·7 per 1000, and exceeded by 1·2 the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 4·4 in Dundee and 5·8 in Glasgow. The fatal cases of measles, which had been 35 and 39 in the preceding two weeks, further rose to 41 last week, of which 27 occurred in Glasgow and 12 in Dundee. The 37 deaths from whooping-cough showed an increase of 15 upon the number in the previous week, and included 21 in Glasgow, 6 in Aberdeen, and 5 in Edinburgh. Of the 6 deaths from scarlet fever 3 occurred in Glasgow. The 4 fatal cases of diphtheria showed a decline of 2 from the number in the previous week, and included 2 in Glasgow, where both the deaths referred to "fever" were also recorded. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 105 and 98 in the preceding two weeks, rose again last week to 110, and exceeded by 38 the number in the corresponding week of last year. The causes of 62, or nearly 11 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·4 and 25·3 per 1000 in the preceding two weeks, declined again to 20·8 during the week ending June 21st. During the first twelve weeks of the current quarter the death-rate in the city averaged 23·8 per 1000, the rate for the same period being 17·4 in London and 19·5 in Edinburgh. The 141 deaths in Dublin last week showed a decline of 30 from the number in the previous week; they included 4 which were referred to whooping-cough, 2 to "fever," 1 to measles, and not one either to small-pox, scarlet fever, diphtheria, or diarrhœa. Thus the deaths from the principal zymotic diseases, which had been 9 and 12 in the preceding two weeks, declined again last week to 7; they were equal to an annual rate of 1·0 per 1000, the rate from the same diseases being 2·7 in London and 1·5 in Edinburgh. The fatal cases of whooping-cough were within one of the number recorded in the previous week. The deaths referred to different forms of "fever," which had been 4 in each of the preceding two weeks, declined to 2 last week. The deaths of infants showed a marked decline, while those of elderly persons differed but slightly from the numbers recorded in recent weeks. Two inquest cases, and 3 deaths from violence were registered during the week; and 28, or nearly one-fifth, of the total deaths occurred in public institutions. The causes of 18, or more than 12 per cent., of the deaths were not certified.

Correspondence.

"Audi alteram partem."

SHOULD WOMEN PLAY CRICKET?

To the Editors of THE LANCET.

SIRS,—It seems to me that a word of warning ought to be addressed to those ladies who either have already adopted the game of cricket as a means of vigorous exercise or pleasurable physical excitement, or are contemplating so doing, concerning the dangers incurred thereby, to which the female constitution renders them particularly obnoxious. One of these, at least to my mind, stands prominently forward. I allude to the danger which is incurred from the violent impact of a hard cricket-ball on the mammary gland. The time of life at which women are likely to play cricket cannot be far removed from the period of active growth assumed by this organ at puberty. It is quite true that pathologists do not now maintain that a trauma is certain cause in this organ or in any other of cancerous growth, but there are other growths which may become malignant without necessarily being cancerous. It is now generally admitted that the malignancy of a morbid growth is due rather to some deficiency in the vital resisting power of the surrounding tissues than to any peculiar aggressiveness of the tumour itself. Perhaps the most common instance of this loss of physiological resisting power of the tissues is that caused by inflammation or inflammatory processes. It is not difficult to conceive such processes as being pretty actively excited in a young woman's mammary gland by the blow of a cricket ball. In the absence of the physiological resistance thus caused, the glandular growth, consisting as it does of proliferating epithelium and connective tissue, will at least have an opportunity of becoming abnormal or atypical, and thus to give rise to an adenoma. Originally the adenomata we know are not malignant, but we have it on the authority of Cohnheim that all tumours may under favourable circumstances assume the general characteristics of malignancy, without change in chemical constitution or histological structure.

The same conditions may in other cases afford the actual means of growth to cancerous germinal tissue, latent until the normal physiological tissue resistance which hindered its growth be removed by the means above indicated.

Apart from these terrible risks, we must surely be excused if we fail to be able to contemplate with equanimity the idea of the horrible pain which such a blow must cause at the time. Surely, Sir, there is no need for ladies to indulge in this eminently virile game. There is no doubt of their muscular capacity, but the greater this is, the greater the risk of injury in this particular game. We have tennis and other games, which, compared with cricket, are harmless; cannot the ladies be persuaded to content themselves with these? I am, Sirs, yours truly,

Finsbury-circus. W. HENRY KESTEVEN.

MR. SPEAR'S REPORT ON DIPHTHERIA AND CROUP IN THE SUB-DISTRICT OF PONTYPRIDD.

To the Editors of THE LANCET.

SIRS,—In your issue of June 7th you give some extracts from the above report. As I was the medical attendant of all the cases of diphtheria and croup in the Cilfynydd district would you kindly allow me to refer to one statement in the report? On p. 3 I find that "no precautions whatever were taken or attempted to be taken to prevent its extension." Soon after I came to Pontypridd (in Nov., 1887), I noticed the great prevalence of throat affections in the district of Cilfynydd. As I was confident they were due to the insanitary condition of the village, I brought the matter several times to the notice of what I thought was the proper authority, but nothing was done. During the year 1888, both by letter and personally, I communicated several times with the inspector of nuisances, and even took him over the plague spots of the place myself with the view of having some improvements effected. Towards the end of that year diphtheria was very prevalent, and I persistently kept the insanitary condition of the place before those interested. Owing to my action a public meeting was held in the village which I attended, and it was at that meeting the deputation mentioned on p. 3 (of which I was a member) was appointed to wait on the sanitary authority. Another meeting was subsequently held, and I went with a deputation to the ground landlords, and in the most earnest way pointed out the terrible condition of the place and besought immediate action. I also communicated several times with the agent of some of the property where the drainage was defective, and I am justified in saying that it was owing to my representations that a new drain was laid down in this street and other drains elsewhere, as well as having the village daily scavenged. I stated these facts to Mr. Spear, and remember adding that "not being the medical officer of health, I did not see that I could do more." As to preventing the spread of the disease by personal contagion (granting that it is communicated in that way) it was simply impossible. As the report states: "The practice of taking lodgers is general, and there is considerable overcrowding"; and on p. 8: "As the medical officer of health [of the Pontypridd urban sanitary district] points out, isolation in the cottages of the district is practically impossible." Time after time have I endeavoured to prevent the visits of sympathising friends and neighbours, often accompanied by children; but very often my warning was unheeded. Since Mr. Spear's investigation another child has died of diphtheria, and there were two cases of "diphtheritic" throat in the same house; but the disease did not spread further. For a long time the district was totally neglected by the sanitary authority, and even now they have declined to adopt the Notification of Diseases Act.

I am, Sirs, yours respectfully,

June 23rd, 1890. J. SHAW LYTTLE, M.D.

THE CHEMISTRY OF GOUT.

To the Editors of THE LANCET.

SIRS,—I appeal to the apothegm that stands at the head of your correspondence column, "Audi alteram partem," in asking you to do me the simple justice of allowing me to say that the hypothesis submitted by Sir William Roberts in his recent paper on the Chemistry of Gout, affords a clear and probably accurate exposition of the *rationale* of "the iodine treatment," for which I have been so severely held responsible. My contention has been, and still is, that the administration of alkalies, whether as carbonates, citrates, or salicylates of sodium, is not justifiable, on chemical ground, except in very special states of the system, and then not for its elimination of uric acid; because by giving sodium or any similar base we are facilitating the formation of those very salts which in the main constitute the "irritant" of gout. I have given iodine because I believe and think I can demonstrate that it decomposes the urates, bringing away the sodium base as iodide of sodium, and leaving the uric acid free or in a condition which is unirritating. It now appears, according to the theory propounded by Sir William Roberts, that while the uric acid is in combination as a quadrurate there is no precipitation, but that the moment a biurate is formed down it falls. This is precisely what might be hypothecated from the clinical and chemical study of cases treated with iodine. When the blood becomes saturated, or, perhaps I ought to say, strongly impregnated with iodine, a copious outpouring of uric acid generally occurs, the iodine passing out in the urine as iodide of sodium. If iodide of sodium be administered, the result is much less satisfactory than when the iodine is given in some form which admits of its prompt liberation *without the supply of more sodium to facilitate the formation of biurates!* I, therefore, give iodine either as tincture of iodine, or iodoform, di-iodo-hydriodide of caffeine, or hydriodic acid. It matters little how it be given if only there be no sodium or similar base given with it. The notion of making elimination easier by rendering the blood increasingly alkaline is not one which will stand the test of scientific criticism, or, as I believe, of bedside practice. The gastric, hepatic, duodenal, and splenic disturbances, which are relieved by "alkaline flushes," with consequent subsidence of the neuralgic symptoms to which they give rise, are not, I venture to think, caused by *uric-acid* storms, but by alcoholic, lactic, butyric, and hydrolytic fermentations, which are often associated with, and may induce, "uric-acid storms," but are not themselves originated by the behaviour of $C_5H_4N_4O_3$, or of its immediate combinations. The mere fact of finding an increased quantity of uric acid in the urine after a particular process of digestion, disassimilation, or medical treatment, does not prove that the total quantity of uric acid formed immediately before or at the time of kidney excretion was increased. On the contrary, it not uncommonly happens that accumulations of urates are thrown out by the stimulating action of ingesta which are chemically incapable of either promoting, or themselves contributing to, the formation of uric acid. The chemistry of the urates is, indeed, mysterious, but much of the mystery might, I venture to think, be dispelled by closer clinical study, with a wholesome disregard of traditional beliefs and prejudices.

I am, Sirs, yours faithfully,

J. MORTIMER GRANVILLE.

Hanover-square, W., June 14th, 1890.

THE MEDICAL STAFF OF THE ARMY.

To the Editors of THE LANCET.

SIRS,—While thanking you for your article on the Medical Staff and Mr. Stanhope's position, published in the last number of THE LANCET, permit me to say that the vast majority of the department only desire "real army substantive rank" (and not sham rank, as Surgeon Parke put it) to enable them to perform their duties in an efficient manner. The question of titles is more in dispute, but if *real* army rank be given, and the medical staff be created "a Royal corps," compound titles ought to be quite sufficient. The necessity for "rank" is extreme. Let me quote an instance. Quite lately, a surgeon-major in charge of one of the most important station hospitals in India was invited by the general officer commanding the district to dinner. The surgeon-major was senior to every field officer at the table, yet he was placed below all the majors and given the precedence of a captain. The only excuse for the general is he had only lately taken over command, and possibly he and his A.D.C. knew no better; yet had the surgeon-major belonged to a Royal corps and held substantive rank, such a mistake would be quite impossible. Only last evening I was visiting the Military Exhibition, and, when looking at the admirable groups representing medical aid to the wounded in the field, I chanced to stand near a group of ladies and gentlemen. The ladies naturally expressed their sympathy with the wounded, but one of the gentlemen exclaimed, "Well, such a scene forcibly reminds us of the courage that

surgeons in the field must possess to enable them to do their work under fire—more courage, I think, than fighting men who have the stimulus of the action to keep them going." Yet, in to-day's *Times*, Mr. Stanhope reasserts that medical officers are non-combatant, while admitting they are exposed to the danger of fighting men in battle. The colleges are doing good work: let students take advice and remain outside the department till it gains its proper place in the army.—I am, Sirs, yours obediently,

June 20th, 1890. A BRIGADE SURGEON.

CAN JAUNDICE BE INFECTIOUS?

To the Editors of THE LANCET.

SIRS,—Epidemic jaundice has been attributed to a variety of causes. It has been shown to be associated with enteric and malarious fevers; to have resulted from sanitary defects, from arsenical poisoning, and from climatic influences. As to uncomplicated jaundice ever being truly contagious, there does not appear to be much evidence. But, as catarrh in other forms may be communicable, there would seem to be no reason for denying the communicability of catarrhal jaundice. The following group of cases strongly suggest its occasional infectiveness. H. E——, aged nine years and a half, got a chill from "paddling" in the sea last summer. A laryngeal catarrh resulted, which was followed by an attack of catarrhal jaundice. Three weeks later his two sisters, aged eleven and six years, had similar attacks; while two brothers, aged seven and four, succumbed a week afterwards. A younger child of three years and a half escaped. All these children's cases were well-marked instances of catarrhal jaundice, and in none of them (except the first, who "paddled") was there any explanation of the illness to fall back upon except infection.

I am, Sirs, yours obediently,

THOS. F. RAVEN, M.R.C.S., L.R.C.P.

Broadstairs, June 16th, 1890.

THE CASE OF LEPROSY AT LIVERPOOL.

To the Editors of THE LANCET.

SIRS,—I see in THE LANCET of last Saturday a statement made by Sir M. Hicks-Beach that two medical officers of the Board of Trade held the opinion that the recent case at Liverpool was not leprosy, judging from the symptoms. I can only say that I never saw a more decided case in all my experience. There was certainly no anæsthesia, but looking at the semi-acute character of the case, which, according to all accounts, had advanced by leaps and bounds in its symptoms, no doubt from the irritation of the strong sea air—in three weeks,—this was hardly to be looked for so soon. The anæsthesia will certainly appear later on, as will be found if anyone interested in the case can keep it in view.

I am, Sirs, yours faithfully,

W. MUNRO,

Late Med. Officer, St. Kitts, W.I.; author of "Leprosy."

Manchester, June 24th, 1890.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday.

A MEETING of the General Committee of the Hospital Saturday Fund was held at the Council House on the 24th inst., the occasion being the presentation of cheques to the various charities. The total realised by this year's subscriptions was £9859 5*s.* 9*d.*, an amount which exceeds by nearly a thousand pounds the total of last year. This large sum is an admirable testimony to the liberality of the working classes towards the support of the movement. There is another consideration also which reflects great credit upon the committee—namely, that the proportion of the cost of collection this year is only 4·09 per cent. When the organisation was first started, in 1873, this cost amounted to over 10 per cent., and in some other large towns it is considerably over this. The willing and zealous workers in so great a cause are to be warmly congratulated upon their success.

Alleged Embezzlement of Hospital Funds.

The collector of the Queen's Hospital has been committed to the sessions on the charge of embezzling the funds of this institution. The transactions, it is alleged, have extended over a number of years, and amount to a considerable sum.

Post-mortem Examinations.

At a recent inquest upon the body of a woman who died at the General Hospital after an accident, the coroner made some remarks upon this subject. A necropsy had been commenced upon the body, when it was stopped by order of the coroner. In summing up, he said that he declined to give an order for this because he could not see that it was necessary in order to speak as to the cause of death. It was a very proper thing to make these examinations in the interests of medical and surgical science, and he always made it a rule to assist, if he could, the hospital authorities when such applications were made, with one exception: he had a great repugnance to the opening of a female body, and especially that of an old woman. He thought that the old women in hospitals had a great dread of "opening of the body." Seeing that there appeared to have been a post-mortem examination, he had asked these questions, not that he thought there had been any wilful neglect of his order, but that the matter ought to be explained. Wilful non-compliance would have been contempt of that court, for which someone might have been sent to prison. He was satisfied with the explanation that had been given.

Singular Mutilation.

A man aged fifty-five is at present in the General Hospital under curious circumstances. He was found while suffering from delirium tremens with a large knife and a hammer, with which he had knocked off one of his great toes under the impression that he was cutting his throat.

Want of Ambulance Knowledge.

An Irishman aged thirty, on opening a new clasp-knife, and having partially done so, pressed the edge of the blade on his thigh to complete it. In doing this a deep gash was made in the thigh, which bled profusely; an attempt was made to stop this with a cloth, and then with flour and feathers, without effect, and the man died in about five minutes. A little elementary knowledge would have saved his life, the timely application of a ligature being all that was wanted to avert such a disastrous calamity, but not a bystander possessed the information.

Tinned Salmon.

Most authorities on infant feeding would agree that tinned salmon was an injudicious adjunct to maternal nourishment for an infant; yet an inquest lately held on the body of a small child showed clearly that it died owing to its throat being filled with tinned salmon, which it had endeavoured without effect to swallow. Societies for the protection of infant life might do good by calling attention to this kind of catastrophe, though it is difficult to impart by precept any degree of intelligence to some minds.

Birmingham, June 25th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The New Royal Infirmary.

THE new buildings of the Royal Infirmary are almost completed so far as relates to the external structure, though many internal details remain to be completed. The infirmary became the Royal Infirmary in 1851, on the occasion of Her Majesty's first visit to Liverpool in company with the late Prince Consort, previously to which it was known as the "Infirmary." This circumstance is of itself sufficient to justify the hope that the forthcoming opening of the new infirmary may be honoured by the presence of Royalty. It was at first hoped that the opening might have taken place during the summer, but it is now feared that this cannot be until October.

The Lords' Committee and Local Hospitals.

The committee of the infirmary remarked in their last annual report that its "future maintenance is the subject of most anxious consideration." The income does not increase, but the expenditure does; and it is a melancholy fact that the annual subscriptions of this, the oldest medical charity, and the second oldest of any charitable institution in Liverpool, exceed very little those of fifty years ago. Our larger general hospitals are not open to the charge of

pauperising persons by their out-door departments, since these latter are mostly limited to accidents, urgent cases, and former in-patients. But the misfortune is that they are badly supported and maintained with much difficulty. A very large proportion of the money freely proffered by the charitable public is wasted in indiscriminate charity and in certain special medical and other charitable institutions which are not really requisite, and which might well be comprised in the larger charities. If the inquiry before the Lords' Committee be extended to provincial hospitals, it is very important that evidence should be tendered by those concerned in the administration of Liverpool hospitals. The difficulties with which they have had to contend have been the inevitable result of such a rapid growth as has been that of Liverpool within the present century, and the fact that all our hospitals have very small invested funds. These two circumstances present great difficulties to our hospital managers, and it would be well if they were more generally known.

The forthcoming Assizes.

Crimes of violence continue to be committed with painful frequency, and the forthcoming assizes will probably be the heaviest that has been known for some time past. The knife has been used with shocking recklessness, and it is feared that very severe measures will have to be used to check this serious growing evil.

The Watch Committee and Immoral Houses.

A deputation comprising many citizens, among them being some prominent clergymen, local philanthropists, and Dr. William Carter, waited upon the Watch Committee. Their object was to protest against the report of Captain Nott-Bower, the Head Constable of the city, which had been prepared at the request of the committee. Captain Bower expressed his approval of the manner in which brothels have for many years past been dealt with by the police, the interval comprising the whole of his tenure of office and a large portion of that of his predecessor, Major Greig. The instructions given to the police have been to take proceedings in all cases where very young girls are kept, where robberies have been committed, where such houses are opened in a street or leading thoroughfare hitherto free from them, where they are of notoriously bad character, such as to become a public nuisance, and where they are complained of by two or more inhabitants of the street who will substantiate the complaint in court. The effect of this has been to cause a considerable reduction in the number of these houses from what it was formerly, while those which remain are congregated together in certain streets. This, which the police and others well acquainted with the subject consider as an advantage, is regarded in a very different light by those whom the deputation represented. They consider that all these houses should be suppressed, and point triumphantly to Manchester, Glasgow, and Sheffield as localities where the suppression of brothels has been carried out with great success. Captain Bower regards the statistics from these places as fallacious, and gives good grounds for his opinion, proving, as to Manchester, that if brothels have decreased prostitutes have increased. The statement that Sheffield does not contain one brothel known to the police is of little value in the absence of any information as to the number not known to the police. In view of the fact that the social evil has existed from the earliest times, that prostitution will, like water, always find its own level, it would certainly seem wiser to choose the less of two evils, and to leave these houses, *cæteris paribus*, in certain localities, than to scatter them broadcast all over the city, where, being for some time unknown to the police, they will produce far greater evils. It is proper to add that Dr. Carter protested against the doctrine of vice being an adolescent necessity, and urged that chastity was perfectly consistent with health of mind and body. The deputation were courteously received, and their remarks were promised every consideration. But it is improbable that any further improvement will at present be accomplished.

Liverpool, June 25th.

LEAD POISONING.—At Jarrow a death occurred last week in a lead-worker. At the inquest Dr. Inglis gave it as his opinion that the fatality was due to chronic lead poisoning. The deceased, a woman, had been twice suspended on account of plumbism being present in her system; and the coroner's jury in their verdict recommended that no person should be employed at the works who had been suspended by the doctor.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

City and District Water-supply.

THE returns issued by the Water Trust show that, within a fortnight, there has been an increase of 1,926,293,000 gallons of water stored in the various reservoirs, but that the total quantity stored was about 300,000,000 gallons less than the quantity at the corresponding period of last year. The daily delivery had been at the rate of 39·37 gallons per head. The rainfall at the reservoirs since January had been 15·16 in. and 16 65 in., considerably over that for the same period last year.

The Surgeons' Medical Hospital.

A sale of Turkish antique embroideries was held here last week to provide appliances for this hospital. Dr. Prinski Scott, under whose charge the hospital is, stated that during the past year 12,000 out-patients and 100 in-patients had been treated. The patients were of all nationalities, the greater proportion being Jewish.

Church of Scotland Deaconess Institution.

A Training Home in connexion with this institution has been opened in Glasgow. It is to be connected with the Edinburgh Home, both, in fact, being branches of one institution, the purposes of which are district visiting and home missions. In the Edinburgh Home training is given in these, and the deaconesses attend lectures in the Royal Infirmary on nursing.

Crichton Royal Institution, Dumfries.

As this is the jubilee year of this institution the directors are to erect a chapel in memory of its foundress, the widow of Dr. James Crichton, who left £100,000 for its erection and endowment.

Outbreak of Typhoid Fever near Perth.

An outbreak of typhoid fever is reported on a large dairy farm near Perth which supplied the prison workhouse and other places with milk. Prompt measures have been taken to prevent infection, and this has naturally led to considerable temporary inconvenience by the abrupt cutting off of the milk-supply to these large institutions.

The Microscopical Society.

At the last meeting of this Society, Dr. J. B. Haycraft made a communication on the Development of the Carapace in the Chelonia; Dr. Carrington Purvis on the Microscopic Structure of the Electric Organ of Raia batis; and Mr. Carlier on some New Staining Methods.

Health of the City.

The mortality last week was at the rate of 16 per 1000. The total mortality was 83, and of these 30 were due to diseases of the chest, and 7 to zymotic causes. The intimations for the week included 32 cases of scarlatina and 20 of measles.

The Workhouse Hospital Nurses.

At its meeting to-day the Parochial Board discussed the desirability of each nurse in the workhouse hospital having a separate bedroom, instead of sleeping, as at present, in a dormitory. It was decided that additional bedroom accommodation was required, and the matter was referred to a committee. The Board will have medical opinion with them in this matter.

Medical Matters at the Town Council.

At the meeting of the Town Council to-day the convener of the Public Health Committee intimated that there were fewer patients in the city hospital than at any other time this year. It was also reported that 14,460 lbs. of unsound meat had been seized during May. There appears, however, to be a fallacy in this, from the fact that meat sent in publicly to be examined if detained was included under "Seizures of unsound meat." A letter from Principal Walley on the necessity of an increase in the staff of the Dick Veterinary College was remitted to the Lord Provost's Committee.

It is announced that Dr. R. J. Garden has been appointed an examiner in the Medical Faculty of the Aberdeen University, in place of Dr. Keith, resigned.

Edinburgh, June 24th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

University of Dublin.

AT the annual meeting of the Senate held last week, the Rev. Dr. Haughton proposed that the honorary degree of doctor in medicine be conferred on Mr. John Marshall, President of the General Medical Council, one of the most distinguished of English surgeons, and well known in the literary world by his publications on the relation of anatomy to art. Sir George Porter, Bart., seconded the proposal, and said that Mr. Marshall was a most distinguished man, and in honouring him they were honouring themselves. The grace was passed. The Rev. Dr. Haughton next proposed that the honorary degree of M.D. be conferred on Dr. Richard Quain, a native of Mallow, and distinguished in medicine. He had obtained the highest distinction and degrees that the University of London could confer. He was a Fellow of the Royal Society, and among the most distinguished Fellows of the College of Physicians. Dr. Quain was the editor of the well-known "Dictionary of Medicine," and was best known by his contributions to pathology. Sir John Banks, K.C.B., believed the University of Dublin had never conferred an honorary degree upon any man who was more eminently deserving of it. The grace was passed. During the proceedings attention was directed by a member of the Senate to the omission in the list of honours of the name of Henry Stanley, a man that Royalty delighted to honour, and all the universities with the exception of their own; but his remarks were ruled out of order.

Queen's College, Cork.

It is announced that Mr. James Slattery has been appointed president of this institution in the vacancy caused by the death of Mr. W. K. Sullivan. The friends of Professor Corby, who is connected with the college, he believed would be nominated as Mr. Sullivan's successor.

Presentation to Mr. F. T. Newell, M.B.

Mr. Newell, late house surgeon Meath Hospital, was last week presented by the medical board with a marble clock on the occasion of being appointed medical officer to High-street dispensary. Sir George Porter, Bart., in making the presentation, said that as the testimonial marked the course of time it would remind Mr. Newell of the many dark and dreary nights he had spent beside the sick and wounded in the Meath Hospital, acquiring that practical knowledge of his profession which no time would ever efface; and they hoped it would mark hours and years of future happiness and prosperity in his profession. Mr. Newell on the same occasion was the recipient of a handsome walnut writing table presented by the resident officers and assistant physicians. It is believed that Mr. Wayland will succeed Mr. Newell as house surgeon.

The death is reported of Dr. J. H. Andrews, of Knocknacree, Cloughjordan, after a few days' illness, aged forty-three years.

Dublin, June 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

New Professors.

DR. PHILIP SCHECH has been appointed Professor of Laryngology at Munich. He was born in 1845, and has been a private lecturer at Munich since 1873. His writings are: "Experimental Investigations of the Functions of the Muscles and Nerves of the Larynx," "Studies on the Diseases of the Accessory Cavities of the Nose," and a "Text-book of the Diseases of the Oral Cavity, the Pharynx, and the Nose." The last of these has been translated into English. Schech has also improved the instruments for galvano-caustic operations on the larynx. Dr. George Kruess has been appointed Professor of Analytical Chemistry at Munich. His age is only thirty. His writings have appeared in the Reports of the German Chemical Society and in Liebig's "Annals," and treat of the chemistry of gold, copper, and molybdena. Dr. Kruess pays special attention to spectroscopic methods.

Dr. Heinrich Laehr.

The appointment of Dr. Heinrich Laehr as an assistant in the scientific department for medical affairs deserves special attention, as the members of this highest Prussian Council in medical affairs have always hitherto been either University professors or medical officials, and Dr. Laehr does not belong to either of these classes. His reputation as an alienist, however, stands high. He is the chief editor of the "Journal of the Science and Treatment of Mental Disease," one of the founders of the Societies of Alienists in Berlin and all over Germany, and has frequently been consulted on the introduction of innovations in the treatment of the insane. He took a very active part in the reform of this department in Germany, due to the teaching of Griesinger, Ludwig Meyer, and Westphal. His historical work, entitled "Memorable Days in the History of the Science and Treatment of Mental Disease," has gone through several editions. He was born in 1820, and founded an asylum for female patients at Zehlendorf, a pretty place between Berlin and Potsdam, in 1853. He is still the head of this establishment.

Professor Hermann Fischer.

Professor Hermann Fischer, Privy Councillor for Medical Affairs, and director of the surgical clinic in Breslau, has resigned, and his resignation has been accepted. He began his academic career as a private lecturer in Berlin University in 1865, and was appointed ordinary professor at Breslau in 1868. His special department is military surgery, and the wars of 1864, 1866, and 1870 gave him ample opportunities of perfecting himself in it. The first of his publications was his "Manual of Military Surgery." The most important of his other writings treat of the cause of concussion of the brain, the so-called shock in operations, traumatic fevers, septic nephritis, tumours, &c. His age is fifty-nine.

Professor August Wilhelm von Hofmann.

On the 7th inst., the twenty-fifth anniversary of the day on which Professor von Hofmann returned from England to his native country after winning his spurs as a teacher at the Royal College of Chemistry in London, the leaders of the aniline industry in Germany expressed their gratitude to him as the scientific founder and promoter of that industry by presenting him with an artistically decorated address and a masterly portrait of himself by Angeli.

Children's Homes on the German Coasts.

The tenth annual meeting of the Society for Children's Homes on the German Coasts was held on the 31st ult., Professor Leyden in the chair. The annual report was read by the chairman, and contained the following details. The home at Nordeney was visited last year by 580 children, each of whom stayed on an average fifty-one days and a half. Of these 77 boys and 106 girls were received and kept gratis, and 8 other children partly at the expense of the home. The largest contingent came from Berlin. The home at Wyk received 110 children, that of Groas Mueritz 150, and that of Zoppot 45. The total number was 885. No infectious diseases had broken out in the homes during the past year. Great service was rendered to the Society by the Women's Help Society, of which Frau Professor Leyden is president.

The International Medical Congress.

Besides the deputation of French military doctors, a deputation of three eminent men of science, appointed by the Minister of Public Instruction, will take part in the International Medical Congress in Berlin. Their names are Professors Léon le Fort, Bouchard, and Charles Richet. Professor le Fort's name is a specially honoured one in Germany, for he has repeatedly defended the German surgeons from the unjust accusation that they neglected the wounded French prisoners of 1870–71, and has at all times followed the progress of medical science in Germany with warm sympathy, and reported it to his countrymen. The official representatives of the United States at the Congress will be Mr. C. H. Alden and Major S. Billings. At the suggestion of the Committee of Organisation a Ladies' Committee has been formed, whose main task it will be to make the stay in Berlin as pleasant as possible for the wives of foreign medical visitors.

Berlin, June 24th.

EPIDEMIC IN BRITISH HONDURAS.—Advices from Belize, British Honduras, announce the existence of an epidemic, like yellow fever, in some sections of the country. The colonists are fleeing to the ports; but, finding the steamers quarantined, are leaving in small boats.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Results of Examinations.

THE examinations in the department of medicine of the several Universities in the Province of Ontario were held during the latter part of March and beginning of April, the results being made known last April, but those of the College of Physicians and Surgeons were not begun until April 8th, being conducted simultaneously in Toronto and Kingston; the results, just announced, show that 107 passed the primary and 124 the final. The percentage of failures in the primary subjects was slightly over 50 per cent. and 30 per cent. in the final.

Death from Nitrous Oxide.

The first death in Canada under nitrous oxide is reported from Montreal. A man aged twenty-four went to the office of a dentist, to have a tooth extracted, and requested to have nitrous oxide administered. After assuring himself that the patient was not suffering from heart or lung disease, the dentist administered the gas. No sooner had the tooth been extracted than the patient gave a gasp and fell over in the chair. He was placed upon the floor and artificial respiration performed, but without restoring animation. The patient was not under the influence of liquor, and five hours had elapsed since last taking food (breakfast). The purity of the nitrous oxide was tested shortly after the accident by the President of the Dental Association, Dr. Beers, who himself inhaled it from the same inhaler. The verdict of the jury was that the man died from syncope, caused by the administration of the gas, and they exonerated the dentist from blame.

Ontario Medical Society.

The tenth annual meeting of this Society will be held in Toronto on June 11th and 12th. The President's annual address will be delivered by J. A. Temple, M.D., C.M. (McGill), M.R.C.S. Eng., Toronto. The preliminary list of papers promises an exceedingly interesting meeting.

The Fire at Longue Point Lunatic Asylum.

On May 6th, the Quebec Provincial Insane Asylum at Longue Point, about four miles from Montreal, was destroyed by fire. The main building, six storeys in height, connected by wings with four smaller ones, five storeys high, had a frontage of 630 ft., being built of brick, with cut stone, was erected in 1874 at a cost of £145,000, and contained at the time of the fire about 1500 patients, of whom between fifty and one hundred perished in the flames. The fire was first noticed about 11.30 A.M., when smoke was discovered entering the chaplain's room, situate in the main building. From here it spread with amazing rapidity, and in an incredibly short space of time the whole institution was enveloped in flames. In their endeavours to rescue the inmates, six of the nuns perished. The asylum was under the exclusive direction of the nuns of the Order of Providence, Sister Theresa, lady superior of the Order, having the entire control; and a nun holding the position of superintendent of each of the male and female wards. Only two resident physicians were attached to the asylum, one in each department, and they were under the control of the nuns. The Order received £20 for each patient from the Provincial Government.

The new Protestant Asylum for Quebec was opened on May 6th, and will be completed early this autumn. Dr. Burgess, for some years connected with the Asylum for Insane, Hamilton, has been appointed superintendent.

The new buildings of the Woman's Medical College, which has just become affiliated with Toronto University, were opened on April 25th. The College is in close proximity to the General Hospital, and will provide accommodation for 100 students.

Subscriptions to the library fund of the University of Toronto continue to be received. It has very wisely been designed to erect a library building separate from the main structure.

Nearly 600 candidates have been undergoing the examinations of the University in the departments of Art and Law, the results not being yet known.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Typhus Fever.

ONE of the English lay papers has it that there is an epidemic of typhoid fever in Cairo, the truth being that enteric fever has only occurred in the person of one visitor, a delicate boy, just convalescing from rheumatic fever contracted in England. There have been no cases lately among the English residents, excepting always the British troops, who, by some unexplained process, and probably in consequence of their youth, seem to be never free from this disease. But our foreign colleagues and the native doctors who have learnt medicine from French professors have a habit of using the three words typhus, typhoid, and *typhique* as almost synonymous. It therefore rarely happens that typhus is called by its right name. On this occasion the explanation is easy, for in three of the prisons in Cairo and its suburbs there have been since the beginning of May more than 100 cases of typhus, of whom ten have already died. Associated with these cases have been a few of relapsing fever, which in Egypt is a very common associate. A huge epidemic of the two fevers in 1886, in the convict prison of Tourah, near Cairo, in which, out of a total number of 964 men, some 254 died during the months of April and May, seemed for a time to have taught the Government that overcrowding and ill ventilation were dangerous experiments for the health of the prisoners. But lately, in defiance of all medical advice and the solemn warnings of the Prison Department, they have massed 1000 men by night into cells only built for 400. The overcrowding is due to several causes—to the criminals preferring imprisonment to fine, to the judges insisting upon cases under appeal coming to be tried in Cairo, to the want of sufficient funds to build large and airy prisons, and, above all, to the apathy and carelessness of native officials. The sick cases as they occur are removed to a hospital at Tourah, under the charge of the sanitary department, and it is to be hoped that all the other prisoners are being exposed to outside air by night as well as by day. In addition to a few scattered cases among the crowded native quarters of Cairo, twelve men suffering from typhus found their way to Kasr-el-Aini Hospital, of whom two have died and ten are convalescing. In all these cases it was impossible to see the eruption because of their dark brown skins, but all the other ordinary typhus symptoms were present. The only other place from which typhus is reported is at Tantah, where thirty-six cases are said to be under treatment. Small-pox is reported from two provinces in the Delta, and also from Suakim. Measles, to the extent of fifty-six cases and ten deaths, exists in two neighbouring villages in Lower Egypt.

Famine at Suakim.

The dervishes in the neighbourhood of Suakim are said to be put to the greatest straits to get food for themselves. Many of the friendly natives have reached the town half starved, and the Egyptian Government has opened barracks to receive them. The Church Missionary Society is now sending its medical representative, Dr. Harpur, there to work among them, the Jesuit Fathers being already in the field. Dr. Harpur has two free dispensaries for natives in Cairo, at one of which fifty, and at the other twenty, patients attend daily. His chief hospital assistant is a Bedouin from Upper Egypt, who originally came to him as a patient, and now, after a successful lithotomy, declines to leave him.

Bouton du Nil.

Dr. Fouquet has recently made some investigations with regard to the Nile boil, and finds that this apparently parasitic malady possesses the same micrococcus as the better known and much more important Aleppo or Biscara boil. But it is not a very serious matter in Egypt, judging by the experience of the last few years.

Foundlings in Hospital.

Unwanted children are brought to Kasr-el-Aini by the police and are given in charge of wet nurses paid by the Government. This has been going on for some years, but it is only during the last twelve months that the system has been subjected to regular inspection. Every week now the women present themselves to be paid after undergoing the

careful scrutiny of a doctor and an English sister. Fines are inflicted unless both child and nurse are clean and healthy. Moreover, the infant's weight is registered, its teeth noted, and the mother's milk tested. This has led to the greatest possible improvement in the sixty or seventy foundlings always under supervision. No difficulty is experienced in finding the children homes as they grow up, and the boys, until they are claimed by some would-be parent, are kept in the hospital to learn to read and write from a sheikh, and to make themselves useful in a variety of ways.

Small-pox.

A small-pox epidemic having broken out in several villages in Egypt, a sum of £2000 has been granted by the Government for vaccinating purposes.

Cairo, June, 1890.

Obituary.

CHARLES HENRY KEEP, M.R.C.S.

MANY an old Guy's man and many a non-professional friend will have heard with regret of the death of Charles Keep. During the period of his student life at Guy's he was recognised by both members of the staff and those of his more intimate friends as being an exceptionally clever man. With more energy and application he would have risen to the highest grades of his profession, as experience showed that anything he undertook in earnest he ever accomplished. After taking his M.R.C.S. and passing the First M.B. Lond., Charles Keep became one of the most popular and capable house surgeons Guy's has had for many a year. On quitting the hospital he for six years held the post of resident medical officer at Wyke House Asylum; and his leaving this appointment to go abroad was the cause of general regret, as his courtesy of manner, skill, and kindness to those who came under his care were felt by one and all. Little more than twelve months ago Mr. Keep went to the Seychelles, where he immediately made a large and lucrative practice. By his skilful operations, kindness to the poor, and that *bonhomie* which was so characteristic a feature of the man, he won the esteem of all with whom he came in contact. With everything promising so well, news suddenly ceased, only to be followed, after many months of suspense to his friends, by the announcement of his sudden death on May 3rd, at the early age of thirty-five.

Medical News.

UNIVERSITY OF OXFORD.—The degree of M.B. was conferred on the 26th inst. on the following gentlemen:—

Thomas Legge, Trinity; Thomas Tuke, Brasenose; Gainel Farmer, Balliol; Lawrence Bennett, Cyril Ogle, Trinity; Walter Turrell, Turrell's Hall; Donald Speaker, New College; Robert Schofield, Christ Church.

UNIVERSITY OF CAMBRIDGE.—The following gentlemen have been examined and approved on the first and second parts respectively of the Third Examination for Medical and Surgical degrees:—

Ds. Attfield, Pet.; Ds. Batten, Trin.; Ds. Beaumont (W. H.), Down.; Ds. Bennetts, Caius; Ds. Bradley, Caius; Burton (F. W.), Joh.; Buss, Sidney; Ds. Carruthers (A. E.), Christ's; Ds. Cowell, Joh.; Ds. Earl, H. Cav.; Ds. Fosbery; Ds. Fyffe, Caius; Ds. Gillam, H. Cav.; Ds. Gillett, Sid.; Ds. Gimson, H. Cav.; Ds. Grabham, Joh.; Ds. Greaves, Caius; Ds. Hale, King's; Ds. Hall (J. B.), Pemb.; Ds. Hall (R. H.), Pemb.; Ds. Hardy, Jesus; Ds. Harrison (S. N.), Trin.; Mag. Head, Trin.; Ds. Lea (J.), Caius; Ds. Long (D. S.), Caius; Ds. Low (P. C.), Clare; Molson (J. E.), Emman.; Ds. Molteno, Clare; Mag. Panting, King's; Ds. Peck (E. S.), Christ's; Ds. Pethick, Down.; Ds. Richardson (J. C.), Caius; Rouillard, Caius; Ds. Shaw, King's; Ds. Simmons (W. W.), Joh.; Ds. Smith (H. Austen), Trin.; Ds. Smith (H. E.), Caius; Ds. Stubbs, Trin.; Ds. Sutton, Clare; Ds. Swayne, Trin.; Ds. Thomas (R. S.), Jesus; Ds. Treadgold, Down.; Ds. Waggett, Pemb.; Wellford, Trin.; Mag. White (C. P.), Clare; Ds. Wilks, Caius; Ds. Winslow (W.), Caius; Ds. Barclay-Smith, Down.; Bindloss, Joh.; Burton (F. W.), Joh.; Ds. Creswell, H. Cav.; Ds. Daggett, Caius; Mag. Dalton, Trin.; Ds. de Jersey (W. B.), Pemb.; Ds. Dixon, H. Cav.; Mag. Dumergue, Corpus; Ds. Durham, Christ's; Ds. Fletcher, Trin.; Mag. Foster, Trin.; Ds. Handson, Caius; Ds. Long, Caius; Ds. Muir, Trin.; Ds. Nix (H. W.), Caius; Ds. Pilcher, Clare; Rouillard, Caius; Ds. Russell (J. W.), Trin. H.; Ds. Scott (T. W.), Caius; Ds. Smith (H. Austen), Trin.; Ds. Swayne, Trin.; Mag. Trevithick, Trin.; Mag. Tuppen, Caius; Ds. Wickham (G. H.), Caius; Ds. Williams (E. C.), Christ's; Ds. Yeoman, Caius.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE. At the Convocation held on June 24th, the following candidates were recommended for the degrees specified:—

Doctor in Medicine for Practitioners of Fifteen Years' standing.—Chas. Douglas Bowdich Hale, L.R.C.P. Lond., M.R.C.S.; Morgan Lloyd, L.R.C.P. Lond., M.R.C.S.; Robert Manser, M.R.C.S., L.S.A.; W. F. Pendavis, L.R.C.P. Edin., M.R.C.S.; H. Geary Dyer, L.R.C.P. Edin., M.R.C.S.

(Chas. Wm. Chapman, M.R.C.P. Lond., M.R.C.S., has passed the professional part of the Examination, and will be recommended for the degree of M.D. when he has satisfied the Examiners in Arts.)

Doctor in Medicine.—Sidney Jas. Allden, M.B., B.S.; Alfred Reuben Aubrey, M.B., M.R.C.S.; Wm. Baigent, M.B., B.S.; Laurence Augustus Baine, M.B., B.S.; J. Barrington Baker, M.B., M.R.C.S., L.R.C.P. Edin.; Sidney Algernon Bontor, M.B., B.S., M.R.C.S., L.R.C.P. Lond.; John Wm. Dalgliesh, M.B., B.S., M.R.C.S., L.R.C.P. Lond.; Norman Davis, M.B., B.S.; Aug. Fredk. Dimmock, M.B., M.R.C.S., L.S.A.; Chas. Henry East, M.B., B.S., M.R.C.S., L.S.A.; F. Washington Everard Hare, M.B., M.R.C.S.; John Wm. Buckley Pogson, M.B., B.S.; Joseph Smith Revely, M.B., M.R.C.S.; Edwd. Walpole Simmons, M.B., M.R.C.S.; John Stokes, M.B., B.S., M.R.C.S., L.S.A.

Master in Surgery.—Geo. Walter Ridley, M.B., F.R.C.S.

Bachelor in Medicine.—H. Brunton Angus, Coll. Med., Newcastle-on-Tyne; Fredk. Carden Brodie, M.R.C.S., L.R.C.P., L.S.A., Middlesex Hosp.; Robt. Francis Craggs and Chas. A. Dalgliesh, Coll. Med., Newcastle-on-Tyne; Henry Gott, Yorkshire College, Leeds; Oakley E. Higgens, M.A., M.R.C.S., L.R.C.P., St. Mary's Hosp.; James Alfred Hutton, M.R.C.S., L.R.C.P., Middlesex Hosp.; Kenneth Worsley Poole, M.R.C.S., L.R.C.P., London Hosp.; Lionel Litchfield Preston, M.R.C.S., Middlesex Hosp.; Wm. Jerman Scott, M.R.C.S., L.R.C.P., Guy's Hospital; Henry Smith, Coll. Med., Newcastle-on-Tyne; Geo. Stephen Ware, M.R.C.S., L.R.C.P., L.S.A., Middlesex Hosp.; A. W. Brougham Warde, M.R.C.S., L.R.C.P., St. Barthol. Hosp.; Guy Edwd. Mills Wood, University College Hospital.

Degree of Bachelor in Surgery.—H. Brunton Angus, Walter Alexander Atkinson, M.B., Burdon Cox, M.B., Robt. Francis Craggs, and Chas. Alfred Dalgliesh, Coll. Med., Newcastle-on-Tyne; Hor Davis, M.B., Middlesex Hosp.; Henry Gott, Yorkshire College, Leeds; Jas. Alfred Hutton, M.R.C.S., L.R.C.P., Middlesex Hosp.; Kenneth Worsley Poole, M.R.C.S., L.R.C.P., London Hosp.; Lionel L. Preston, M.R.C.S., Middlesex Hosp.; Wm. Jerman Scott, M.R.C.S., L.R.C.P., Guy's Hosp.; Henry Smith, Coll. Med., Newcastle-on-Tyne; Arthur W. Brougham Warde, M.R.C.S., L.R.C.P., St. Bartholomew's Hosp.; Geo. Stephen Ware, M.R.C.S., L.R.C.P., L.S.A., Middlesex Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed the June examinations in the subjects indicated:—

Surgery.—G. H. Brand, King's College; L. C. Brohier, L.M.S. Ceylon, M.R.C.S. Eng., Ceylon Medical College and Middlesex Hospital; T. H. English, London Hospital; G. Garrard, St. Mary's Hospital; C. T. W Hirsch, London Hospital; R. H. E. G. Holt, St. Mary's Hospital; H. J. R. Jones, London Hospital; A. M'Farland, Dublin; C. A. Morgan, St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—F. D. Bennett, St. Bartholomew's Hospital; G. Gresswell, B.A. Oxon., Westminster Hospital; A. H. Head, London Hospital; H. R. Henley, King's College; R. H. E. G. Holt, St. Mary's Hospital; A. M'Farland, Dublin; H. Mason, Birmingham, Queen's College; H. C. Phillips, M.R.C.S. Eng., St. Mary's Hospital; J. Wells, London Hospital.

Forensic Medicine and Midwifery.—P. D. Addis, University College.

Midwifery.—H. G. Morris, Middlesex Hospital; P. J. Ryan, University College.

The following received the Diploma of the Society qualifying for registration:—

Messrs. Bennett, Brand, Brohier, Head, Henley, Holt, Jones, M'Farland, and Phillips.

EXAMINATION IN ARTS.—The following candidates have passed in all the subjects required for registration:—

Second Class.—D. Amphlett, F. Breese, A. E. Cannell, C. A. A. Coulthard, H. W. Evans, U. M. Fowler, F. J. Koats, J. G. O. Lane, W. Lethbridge, M. M. Lowsley, J. E. Martin, J. Matthews, R. S. Parris, E. A. Philpots, J. P. Prell, G. M. Seagrove, W. A. Sharpin, E. C. Smith, E. M. Smith, B. R. Staines, and P. E. Tresidder.

The results of the examination in Arts qualifying for registration as medical student, held in the Hall of the Society on the 6th and 7th inst., have just been published. There were 200 candidates, and from the pass list it appears that twenty-one were placed in the Second Class, and 111 were certified as having passed in some subjects, but not in all. The next examination will be held on the 5th and 6th of September.

NORTH LONDON VOLUNTEER BRIGADE BEARER COMPANY.—On the 17th inst. the first official inspection of the recruits of this Brigade Bearer Company took place in the grounds of the residence of Brigade Surgeon Danford Thomas, who, with several other officers and the men who have passed through a course of instruction in the Brigade Ambulance School, received the inspecting officer, Surgeon Ramsay, Scots Guards, Medical Staff Corps. At the termination of the inspection the inspecting officer expressed high approval of the way in which the men had acquitted themselves, and said he would be able to recommend every man presented for examination for the War Office certificate.

THE AFTER-CARE ASSOCIATION.—The annual meeting of the Association was held at 83, Lancaster-gate, Hyde-park, W., on Monday, June 23rd, the chair being taken by the Right Hon. the Earl of Meath.

NEW INFIRMARY AT STAFFORD.—The Earl of Shrewsbury has generously offered an eligible site at the Lammascotes, on the confines of the borough, for a new hospital, which the Executive Committee of the Staffordshire General Infirmary has accepted. The present building was erected upwards of a century ago, and is wholly unsuited and inadequate for the present requirements. The estimated cost of the new infirmary is about £10,000.

HOSPITAL SATURDAY FUND.—The first general meeting of this fund since its incorporation was held on the 14th inst., at Anderton's Hotel. Mr. H. W. H. Hoare presided. The financial statement showed that £4196 12*s.* had been received since January 1st, whilst £2070 11*s.* had been expended, the balance of assets over liabilities being £2445 8*s.* The Lord Mayor was elected president of the fund, and Alderman Sir J. Whitehead chairman of the council.

NORTH-WEST LONDON HOSPITAL.—The eleventh annual report of this hospital, in the Kentish Town-road, shows that during the past year 537 in-patients had been admitted and 46,851 cases treated as out-patients; 13,906 of these were new cases. Help had been given to 18 patients from the George Sturge Samaritan Fund. The total receipts were £3378 3*s.* 9*d.*, and the expenditure amounted to £3652 14*s.* 9*d.* Allusion is made to the compulsory relinquishment of the prize distribution scheme, which gave promise of a large augmentation to the funds.

PRESENTATIONS.—Surgeon-Major William John Naismith, M.D., F.R.C.S.Edin., has been presented, on the occasion of his marriage, with a handsome piece of silver plate, consisting of a centre cup and two smaller cups, by the officers, non-commissioned officers, and men of the Ayrshire Yeomanry Cavalry, as a mark of esteem and appreciation of his services to the regiment, and especially of his zeal in ambulance instruction.—The return home of Dr. Thomson and his wife to Wattlesborough from their wedding tour was last week the occasion of a popular celebration by the residents of the district. Public entertainments and rural sports took place, together with the presentation of an address and a purse containing fifty sovereigns from his patients, friends, and neighbours as a testimonial of esteem and friendship.—Dr. Henry Skelding, who has lately resigned his three years' appointment of resident medical officer to the Bedford General Infirmary to practise in partnership in the town, has been presented by the medical staff, and other medical friends in the town, with a very handsome marble timepiece, surmounted by a bronze figure, and the nursing staff and servants with a brass pedestal lamp and a tea tray.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—The Rev. T. F. Cumberlege, the rector of St. Paul's, Covent-garden, distributed last week the annual prizes to the successful students of this medical school. From the annual report, which was read, it appeared that a total of 170 students had entered the school during the year. Reference was made to the important enlargement of the school building, with its increased facilities for study. The prizes were then presented as follows:—The Llewellyn Scholarship and £25 to Mr. H. S. Baker, and the Golding Scholarship and £15 to Mr. G. H. Hooper, who also gained the senior physiology prize, the practical physiology prize, and the practical chemistry prize. Mr. J. B. Williams gained the Governors' clinical gold medal, Mr. J. Busfield the Pereira prize, Mr. T. H. Symonds the senior anatomy prize, Mr. W. Escombe the junior anatomy prize, Mr. W. T. White the junior physiology prize, Mr. E. B. Jones the chemistry prize, Mr. A. W. W. Hoffman and Mr. W. S. Mercer the medicine prizes. The former also gained the summer practical medicine prize, Mr. J. Busfield the winter practical medicine and surgery and the therapeutic prizes, Mr. A. G. Ince the minor surgery prize, Mr. J. Busfield the midwifery and the forensic medicine prizes, Mr. H. W. Cook the pathology prize, Mr. W. M. Palmer the materia medica prize, and Mr. W. May the dental surgery prize.

MEXBOROUGH COTTAGE HOSPITAL.—The sum of £37 12*s.* 3*d.* has been handed over to the treasurer of the hospital on behalf of the Manvers Main miners, and the money has been gratefully acknowledged.

THE ANIMALS' INSTITUTE.—Having observed the great work being done at the Animals' Institute in alleviating the sufferings of animals, a gentleman has made a handsome offer, if others will come forward to help in forming a similar establishment in the East-end, where so much cruelty and suffering exist, through ignorance and inability to procure proper medical aid for animals. Full details can be had from the medical superintendent of the Institute, 9, Kinnerton-street, Wilton-place, S.W.

AMERICAN MEDICO-LEGAL CONGRESS.—A letter has been addressed by Mr. Clark Bell of New York to the Hon. James G. Blaine, Secretary of State, Washington, setting forth the objects of this congress, to be held in America in 1892, and requesting the countenance of the American Government to the movement. In his reply Mr. Blaine says the importance of such a gathering could not be over-estimated. The intelligent discussion of scientific questions, especially those which so closely affect the human family, by a body of gentlemen learned in medico-legal science, must prove of especial value, and should be worthy of every effort, which has for its mission the amelioration of the condition of mankind. He expresses his individual sympathy with the objects and purposes of the conference.

OPENING OF THE NEW BRANCH OF THE SEAMEN'S HOSPITAL.—On Tuesday afternoon the Prince and Princess of Wales opened at the Albert Docks the new Branch Hospital of the Seamen's Hospital Society. An address was read by the Duke of Edinburgh, in which it was stated that from 1821 to 1870 the hospital was successfully established on Board H.M.S. *Grampus*, and on H.M.S. *Dreadnought*, on the Thames, and since 1870 in the infirmary of the Royal Hospital at Greenwich, where it affords accommodation for 225 patients, and has, since its establishment, by means of voluntary contributions from the public, relieved nearly 300,000 seamen of all nations. The branch hospital was equipped to accommodate fourteen in-patients, with medical and nursing staff, and out-patients. There is no other hospital within three miles, and cases in the docks and in vessels have hitherto had to be conveyed long distances under circumstances of great suffering to the patients. Attached to the hospital will be a horse ambulance, for removal of patients from their vessels. The Prince of Wales expressed his best thanks to the President and Committee and the gratification it gave them to take part in the work. They were fully alive to the great importance of this branch hospital, which would mitigate the sufferings of seamen, not only of our own country, but of all nations of the world.

THE ANNUAL DINNER OF THE ARMY MEDICAL STAFF.—The officers (past and present) of the department present at the dinner, of which we gave last week a brief record, were:—Directors-General: Sir Thomas Crawford, K.C.B.; W. A. Mackinnon, C.B. Surgeons-General: Sir J. H. Ker Innes, K.C.B.; J. Irvine, W. H. Muschamp, J. B. C. Reade, C.B.; W. Stewart, T. Tarrant, W. A. Thomson. Deputy Surgeons-General: W. Bisset-Snell, W. G. Don, J. G. Faught, G. K. Hardie, H. C. Herbert, R. Lewer, E. MacGrath, W. Sly, F. W. Wade, J. Warren, J. Watts. Brigade Surgeons: C. A. Atkins, J. F. Beattie, M. Cogan, E. Footner, G. C. Gribbon, J. B. Hamilton, J. Hector, J. Hulseberg, J. Johnstone, J. G. Leask, J. S. MacAdam, C. Mackinnon, T. R. Mould, W. Nash, W. B. Ramsbotham, W. F. Ruttledge, G. Ryan, F. B. Scott, C.M.G.; W. J. Wilson, J. W. Wright. Surgeons-Major: H. Comerford, W. Creyh, J. D. Edge, F. Hensman, W. Johnston, T. Ligertwood, J. Macartney, H. A. Martin, W. H. McNamara, J. Maturin, J. Notter, T. W. Patterson, W. S. Pratt, E. A. Roe, W. F. Stevenson, J. N. Stock. Surgeons: R. H. Firth, J. R. Stuart. The toasts drunk were—"The Queen," "The Prince of Wales and the rest of the Royal Family," both proposed by the Chairman, and responded to by Mr. C. N. Macnamara; "Our Guests," proposed by Sir Thomas Crawford, and responded to Mr. J. Hutchinson; and "The Chairman," proposed by Sir W. Mac Cormac, and a most harmonious and pleasant evening was spent.

ROYAL COLLEGE OF SURGEONS.—In the list published on June 14th of gentlemen who received the Fellowship of the College, James Dundas Grant was described as M.B. Edin. It should have been M.D. Edin.

POOR LAW MEDICAL OFFICERS' ASSOCIATION.—At a meeting of the Council held at their rooms, 3, Boltcourt, Fleet-street, on the 12th of June, a paragraph from a London newspaper was read, announcing that a district poor-law medical officer had offered to sign certificates required by the new Lunacy Act for the retention of pauper lunatics in a workhouse, for a fee of five shillings each. It was unanimously resolved to call the attention of this medical man to a resolution of the council, passed at a previous meeting, to the effect "That in the opinion of this council a minimum fee of half-a-guinea should be charged for these certificates," and that he should be asked to reconsider this subject, with a view to obtain for himself and others a proper fee for this duty.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on June 24th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	240	20	—	17	..	277	442
North-Western Hospital	108	31	—	4	..	143	415
Western ,,	128	14	—	8	2	150	262
South-Western ,,	107	..	..	..	..	107	350
South-Eastern ,,	179	11	4	17	1	212	462
Northern ,,	384	28	..	6	..	418	584
Totals	1046	102	4	52	3	1307	2515

SMALL-POX.—*Atlas* hospital ship, 5.

MEDICAL NOTES IN PARLIAMENT.

Children's Life Insurance Bill.

IN the House of Lords on Friday, the 20th inst., on the motion of the Bishop of Peterborough, the following lords were named for the Select Committee on the Children's Life Insurance Bill:—The Lord Chancellor, the Earl of Derby, Earl Spencer, the Earl of Harrowby, Earl Beauchamp, the Earl of Selborne, the Bishop of Peterborough, the Bishop of Ripon, Lord Clifford of Chudleigh, the Marquis of Lothian, Lord Poltimore, Lord Brougham and Vaux, Lord Kinnaird, Lord Norton, Lord Herschell, and Lord Thring.

Army Medical Officers.

In the Commons on Thursday, 19th inst., Mr. MacNeil asked the Secretary of State for War the meaning of the phrase "non-combatant" applied to medical officers, and why medical officers who are called "non-combatant" were not kept in a place of safety with the Pay and Commissariat Department; and also why, in the matter of sick leave, medical officers were treated differently from other officers, being only allowed six months' sick leave, while combatants are allowed twelve months. Mr. Stanhope said: Medical officers are classed as non-combatant for the simple reason that they are not combatants, and that there are only these two designations. It is the fact, nevertheless, that their duties take them under fire far more than other non-combatants, and that many medical officers have been killed or wounded in action, and the Victoria Cross has been conferred upon two of them. Taking six recent campaigns together, the mortality of line officers was 5·4 per cent., and that of medical officers 3·1 per cent. The question of sick leave is one of expense, as substitutes would be required for medical officers. This applies in a much smaller degree in the case of combatant officers.

Pharmacy Act (Ireland) Amendment Bill.

On Friday, 20th inst., this Bill passed through Committee, Clause 22 being omitted on the motion of Mr. Sexton.

On Wednesday, the 25th inst., on the order that this Bill as amended be considered, Mr. Sexton moved to insert a new clause providing for the first election of representatives of Chemists and Druggists to the Council. The debate, however, was adjourned on the motion of Mr. T. Healy.

Infant Life Protection Bill.

On the motion of Mr. Stuart-Wortley, the following members were nominated on the Select Committee on the Infant Life Protection Bill:—Mr. Bartley, Mr. William Corbet, Lord Francis Hervey, Mr. John Kelly, Mr. Knowles, Mr. William Lawrence, Mr. Walter M'Laren, Mr. Story-Maskelyne, Mr. Mather, Sir Herbert Maxwell, Mr. Patrick O'Brien, Mr. Powell, Mr. Parker Smith, Mr. Francis Stevenson, Mr. John Wilson, Mr. Woodall, and Mr. Stuart-Wortley.

Mortality Returns.

On Monday, 23rd inst., Dr. Cameron asked the President of the Local Government Board if Government would consent to the appointment of a Select Committee to inquire into the sufficiency of the existing law as to the disposal of the dead, for securing an accurate record of the causes of death in all cases, and especially for detecting them where death might have been due to poison, violence, or criminal neglect.—Mr. Ritchie: The great bulk of the 15,747 uncertified deaths are, I am informed by the Registrar-General, included in the 25,132 deaths in which the cause was either not specified or not sufficiently defined for due classification. As regards the 15,747 deaths without medical or coroner's certificate, it must not be assumed that these were all cases in which there was no medical attendance. Many of them were, doubtless, cases which had been attended by unregistered medical practitioners, who cannot give legally recognisable certificates. The proportion both of deaths in which the cause is ill-defined or not specified and of uncertified deaths has been gradually diminishing. It is too late to entertain the question of the appointment of a Select Committee this session, but I will promise the hon. member that the question of the expediency of such a committee shall be carefully considered during the recess.

The Housing of the Working Classes Acts Amendment Bill.

On Tuesday, the 24th inst., Mr. Ritchie, in moving the second reading of the Bill, pointed out the complication which existed in the law on this important subject. He proposed to deal with the Amendment Bill first, and to take immediately afterwards the Consolidation Bill, and if the House assented to them they would be referred to a Grand Committee. He detailed the working of the legal machinery in connexion with the question under the Torrens' Acts of 1868 to 1875, from which it appeared that action in regard to unhealthy dwellings was enormously delayed, and the owners of insanitary dwellings frequently escaped as the Acts were to a large extent inoperative. The method proposed by this Bill made it the absolute duty of the medical officers of health to report to the local authorities any unhealthy dwellings, and on the local authorities it imposed the duty of seeing that there were no unhealthy dwellings in their districts. There would arise no question of the interference of surveyors, as the owners would be themselves responsible for finding out the remedy and do it within a limited time, otherwise the dwelling might be demolished. The scheme gives the local authorities powers to deal with obstructive dwellings, and in the event of the local authorities neglecting to deal with unhealthy areas the County Council would be empowered to take over the duties of such local authorities.—Sir Walter Foster congratulated the right hon. gentleman on the introduction of the Bill, and thought the measure might be improved in many respects when it came before the Standing Committee. After a discussion, in which Sir Wm. Harcourt, Earl Compton, Mr. Stuart, and Mr. Shaw-Lefevre took part, and in which amendments and suggestions were offered by the speakers, Mr. Ritchie, in reply, said he had proposals to make to the House which he believed would go far in the direction of many of the suggestions which had been made to him, but which must be placed before the House in conjunction with the Consolidation Bill.

Public Health (Scotland) Act.

On Wednesday, the 25th inst., the Public Health (Scotland) Amendment Bill was read a second time.

THE LORDS COMMITTEE ON METROPOLITAN HOSPITALS.

This Committee resumed on Monday, the 23rd inst., Lord Sandhurst presiding. The first witness under examination was Mr. Bhabha, M.D. (Brux.), L.F.P.S.G., L.S.A., who is a Scotch Presbyterian minister practising medicine at Nunhead. He suggested some cooperation between general practitioners and hospitals, as the competition existing at present induced an inferior kind of professional men to take up doctors' shops, bad alike for the public and the profession. A wage limit would, he thought, be a sufficient deterrent to keep undeserving people out of the hospitals. He would like to see a system of supervision, with a view of checking expenditure and the misappropriation of the hospital charities.

In reply to Lord Cadogan the witness said there was no adequate room left in hospitals for the poorer patients, as at present only casual inquiries were made. To a question by Lord Lauderdale, the witness replied that he considered if a hospital made no inquiry it had abused its trust. His opinion was that the out-patient department ought to be restricted. People complained to him of the number of doctors about them at these dispensaries, meaning clinical clerks and dressers, who really did the work; and he gave an illustration of a case which occurred within a fortnight at Guy's Hospital, where four young gentlemen who were not qualified medical men had actually examined and touched a patient with two broken limbs before the arrival of the house physician.

Mr. Brodhurst, F.R.C.S., St. George's Hospital, who had been in private practice for nearly forty years, said he had been a member of the Medical Teachers' Association, which had for its object the improvement of the condition of the medical schools. The moneys left for the general hospitals were left solely for the benefit of the poor. Now, however, the hospitals had become mere adjuncts to the medical schools. When the hospitals were built there were no schools, and the medical schools until quite recently were independent of them. In consequence of this connexion the management of the hospitals was extravagant, the food too luxurious, and the nursing fitted for Dives. Every new medicine, bed, knife, &c., must be tried for the sake of the student at the expense of the hospital. It appeared to him that these schools should be removed from the hospitals, and that the hospitals should be conducted as they formerly were, for the benefit of the poor. The out-patient department was totally unnecessary, the majority of the people who applied being more in want of food and baths than of medicine. He had tried to establish at St. George's Hospital a soup kitchen and a place for baths. Paying wards did more damage to the profession than out-patient departments. It was a mistake, and only done because the hospitals had involved themselves. If they resumed their ordinary functions, and separated the schools from the hospitals, they would be richer. From 2000 to 3000 students were to be found in the eleven medical schools in London, where the teachers were all badly paid, and could not devote their whole time to the work; whereas if all these students were collected into one central school, as in Paris, the teaching would be better and the lecturers would be better paid. At the present rate the students contributed something like £100,000 a year in fees, which might be used

not only to pay the lecturers well, but to maintain clinical wards at the hospitals. Asked whether any distinguished men were excluded from hospital appointments on account of not possessing the Fellowship diploma of the Royal College of Surgeons of England, he replied, "Oh no, not at all. The Fellowship is open to everyone. It is only a question of the ability of those who are able to take this position. Every hospital appointment is open; but if candidates had not the knowledge to pass this examination they would not obtain one. There were no fewer than nineteen examining boards, differing very much in their examinations; but the London examinations were by far the most severe." The witness spoke in high terms of the methods of teaching adopted at the Vienna Medical School, which was under State direction, and said there was nothing in London to be compared with the instruction given there. The professors devoted their whole time to the work. Honorary work done by physicians and surgeons gave great trouble, and was frequently a very great drawback to private practice. In the course of eleven years his connexion with St. George's Hospital had cost him £22,000. The Chairman: Does your experience in a hospital lead you to believe that there is any reticence on the part of men connected with the hospitals to come forward? The Witness: Those attached to the hospitals might scarcely be able to tell your lordships anything more about them than is absolutely on the surface, and it could scarcely be expected from those attached at the present moment to the hospitals that they should tell the whole truth with regard to the working of them. He did not believe hospitals could be reformed without detaching the schools from them.

Lord Spencer: Do you consider that the workhouse infirmaries would be important for the students at the central medical school? Witness: Well, I doubt very much if they would be. The cases in those places are of no practical interest to the student. The witness thought chronic cases could be seen in any ordinary hospital. He had not heard of any skilled practitioner using the out-patient department for consultation.

Lord Spencer: Would you make the Central Government appoint the professors? The Witness: That is a matter of detail. A composite board might be appointed for this purpose to examine candidates. The witness, in reply to Lord Kimberley, stated that by adopting the plan of Vienna a saving would be effected for the hospitals, and better men, with more time for study, would be appointed as lecturers.

Lord Kimberley: As a result of this education at Vienna, which you say is very superior to the education given here, are the medical men in Vienna and in the Austrian Dominions superior in knowledge and skill to those who are educated under our system? The Witness: We have in England no such men as Skoda or Rokitanski. His lordship repeated his question, and the witness replied that it was a very invidious thing for him to say. Lord Kimberley: How can we judge of such a system except by the results? I want to ask you whether the men there are, for the most part, more highly and better qualified than in London? The Witness: They are not perhaps better qualified than those who take the higher qualifications, but the majority of them are far better qualified. On the question of special hospitals the witness expressed himself in favour of a controlling body which would be obliged to give licences or some permissive order, which he thought would be a very great advantage indeed.

On Thursday the first witness examined was Henry S. Bennett, M.B. Camb., L.R.C.S., a general practitioner. After his general examination, Lord Thring asked a number of questions referring to subscribers' letters, which the witness said he looked upon as bribes to subscribers. He admitted the system was legitimate, but not a charitable one, and said he regarded it as scandalous for an institution like St. Thomas's, which had an endowed fund for purely charitable purposes, to devote a portion, however small, to such cases as were admitted to paying wards.

Dr. Sinclair Thomson, M.D., F.R.C.S.E., formerly consulting physician to the General Hospital, Peterborough, and physician to the Kensington Free Dispensary was called. He thought that a system of coöperation between hospitals and dispensaries was much required. He considered the system of paying wards most useful. He suggested the establishment of a central board having inspectors to visit the dispensaries and hospitals not necessary under Government, but some authority like the Charity Commissioners.—Lord Cadogan: Do you consider that on the whole the condition of things which prevails calls for any very drastic cure or amendment?—The Witness: No.

Dr. Kay, of St. George's-in-the-East, a practitioner of thirty years' standing, said he knew of many cases where the abuse by persons, who could afford to pay, of the hospital was glaring. He instanced a number of cases from his own knowledge. The competition had starved out seventeen good practices during the last twenty years. In the past, practitioners had made vast fortunes in that district. He thought society could not get on without the out-patient department of the London Hospital, as it removed and relieved a very great deal of misery. He thought, however, that this department should be affiliated to the provident dispensaries, and he would rather have patients in the first instance treated at the dispensaries. He would not mix pauperism up with hospitals or the dispensaries. The present system tended to pauperise the people and degrade the practitioner. Recipients of hospital relief took it quite as a matter of course, and saw no charity in it. He would like to see the whole of hospital charities under some board of supervision, just as the board of guardians was supervised by the Local Government Board. He thought the system of part payment, as a regular commercial system was very bad, as poisoning the public mind, and taking away all respect for the charity.

Mr. Lennox Browne was recalled, and corrected some figures with reference to the Throat and Ear Hospital given by the Charity Commissioners. He stated that the cost per bed of that hospital for the year 1887 amounted to £61 10s. 8d., and the average for five years was £63 13s. 10d. He thought the Commissioners had no right to publish figures referring to the cost per bed without giving the hospital authorities an opportunity for checking them.—Lord Thring: Have you any opinion as to the centralisation of medical schools?—The Witness: I have no doubt it would be desirable, but vested interest is too strong to permit of its being easily brought about. The witness stated that he had a strong opinion on the question of the Scotch and Irish degrees. If a graduate of the United Kingdom—say, from Dublin or Edinburgh, Oxford or Cambridge—did not possess what was really an inferior degree (that of the Fellowship of the Royal College of Surgeons of England), he could not be admitted to an appointment in these hospitals. The Chairman: And therefore you consider that many good men are excluded from appointments because of this protective system? The Witness: I have no doubt of it. There is a gentleman who has recently come to London, and who was formerly a professor in Anderson's College, Glasgow, and an examiner for the qualification of the College of Surgeons in Glasgow, who is absolutely unable to get a London hospital appointment because he does not possess a London degree, and it is a hardship to ask a man of forty or forty-five years to take up an examination which he would have been quite competent to pass as a student.—The Chairman: But that does not obtain in all the general hospitals?—The Witness: I believe so, except in St. Mary's.

Mr. J. F. Garioch, secretary of the Tower Hamlets Dispensary, gave evidence in support of the dispensary system, and contradicted the statement of Sir Edmund Currie, which referred to dispensaries as mere doctors' shops.

The Committee adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ATTERIDGE, JOHN J., M.D., M.Ch.Irel., has been appointed Medical Officer of the St. Veronica's Retreat, Chiswick.

BARCLAY, JOHN, M.D.Aberd., has been appointed Parochial Medical Officer for Banff, and Joint Parochial Medical Officer of Alvah, Banff.

BURD, EDWARD, M.D., M.C. Cantab., &c., has been appointed Consulting Physician to the Salop Infirmary.

BURD, EDWARD LYCETT, B.A., M.D., B.C. Cantab., &c., has been appointed Physician to the Salop Infirmary, vice Edwd. Burd, M.D., M.C. Cantab., resigned.

COLTART, WILLIAM W., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Headley District of the Epsom Union.

CUTHBERT, WILLIAM, M.R.C.S., has been reappointed Medical Officer for the Mendlesham District of the Hartismere Union.

DISNEY, HENRY, M.B., L.M.Dub., has been appointed Medical Officer for Redbourn, St. Albans (Herts) Union, vice Wilson, resigned.

DUGUID, W. R., M.D.Aberd., has been appointed Parochial Medical Officer for Rathven, Banff.

EVANS, HOWELL T., M.R.C.S., has been appointed Medical Officer for the Rock District of the Bedwellty Union.

FERGUSSON, WILLIAM, M.D.Aberd., has been appointed Parochial Medical Officer for Boyndie, and Joint Parochial Medical Officer for Alvah, Banff.

FORBES, GEORGE, M.D.Aberd., has been appointed Parochial Medical Officer for Bellie, Banff.

HALL, F. W., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to Guy's Hospital.

HARRIES, JOHN D., M.R.C.S., has been appointed a Surgeon extraordinary to the Salop Infirmary.

HEHNER, OTTO, has been appointed Public Analyst for the administrative county of the Isle of Wight.

HICKMAN, H. V., M.R.C.S., L.R.C.P., has been appointed House Physician to Guy's Hospital.

HUTCHINSON, R. JAS., M.D.Edin., has been reappointed Medical Officer and Public Vaccinator for the No. 2 District of the Cockermouth Union.

JACKSON, ARTHUR, F.R.C.S., has been appointed Surgeon to the Salop Infirmary, vice Harries, resigned.

LATHAM, GEO., L.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer to the Walsall and West Bromwich District Schools, vice A. P. Evans, resigned.

MORCOM, AUGUSTUS, L.R.C.S. Edin., has been reappointed Medical Officer for the Houghton Regis District of the Luton Union.

MORRISON, R. S., M.B., C.M. Edin., has been reappointed Medical Officer for Cleckheaton.

NISBET, F. J., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Guy's Hospital.

PAGET, P., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Guy's Hospital.

PRITCHARD, TREVOR J., M.B. Edin., L.R.C.P. Lond., has been appointed Medical Officer for the East Retford District of the Retford Union.

PURSLOW, C. E., M.D. Lond., M.R.C.S., Honorary Obstetric Officer to Queen's Hospital, Birmingham, has been appointed Ingleby Examiner, Queen's College, Birmingham, in conjunction with Professor Lawson Tait.

ROBERTS, JOHN L., M.B., C.M. Edin., has been appointed Medical Officer for the Abergele and Pensarn Union District.

SCOTT, C. G. ROBSON, M.B. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

STEWART, WM. L., M.D. Aberd., has been appointed Parochial Medical Officer for Fordyce, Banff.

SYRÉE, ANTON HUGH, M.R.C.S., L.S.A. Lond., Assistant Medical Officer to the Wilts Asylum, has been appointed Assistant Medical Officer to the City of London Asylum, vice Thos. Duncan Greenlees, M.B., C.M. Edin., promoted to the Medical superintendency of Grahamstown Asylum, Cape Colony.

THOMSON, H. ARNOLD, F.R.C.S. Irel., has been appointed Medical Officer and Public Vaccinator for the Bray and Hurley Districts of the Cookham Union, vice Dr. Curwen, resigned. Also to the staff of the Maidenhead Hospital.

TWEEDIE, F. KING, M.B. Irel., has been appointed Assistant Medical Officer for the Fourth District of the Mansfield Union.

WALLIS, A. WM., M.R.C.S., has been appointed Medical Officer for the Cottage Homes of the Parish of Shoreditch.

WILLIAMSON, R. T., M.D., M.R.C.P. Lond., B.S., M.R.C.S., L.S.A., has been appointed Honorary Medical Officer to the Pendleton Branch Dispensary of the Salford Royal Hospital, vice A. Jasper Anderson, M.A., M.B. Oxon., resigned.

ERRATUM.—In the last issue of THE LANCET, the qualifications following the name of Thomas Nesbett Wright should have been M.R.C.S., L.R.C.P. Lond., instead of L.R.C.S., L.M. Irel.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ANCOATS HOSPITAL, Manchester.—House Surgeon. Salary £80, with board and lodging.

BOOTLE BOROUGH HOSPITAL.—Assistant House Surgeon and Dispenser. Salary £40 per annum, with board, lodging, and washing.

EASINGWOLD UNION.—Medical Officer for the Easingwold District of the Union. Salary £26 per annum exclusive of the authorised fees for surgical and midwifery cases. (Apply to Mr. Robinson, Clerk to the Guardians, Easingwold).

GORDON HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Assistant Surgeon.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary £30, with board &c.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Fever Hospital at Monsall. Remuneration £250 per annum, with board and residence.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Junior Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Physician.

QUEEN'S COLLEGE, Birmingham.—Lecturer on Public Health.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and lodging. (Apply to the Assistant Secretary, New Mills, Stroud).

SURREY DISPENSARY.—Resident Medical Officer for one month at a salary of 3 guineas a week.

WELLINGBOROUGH AND DISTRICT MEDICAL INSTITUTE.—Qualified Medical Man to take charge of the same, and attend on members, their wives and families. Salary £280 per annum (exclusive of accouchement fees, at present about £20 per annum), in addition to dwelling-house, with good rooms on ground floor, six bedrooms, bathroom, &c. Surgery, coachhouse, and stable on premises, all free of rent, taxes, and repairs. Surgeon to provide his own horse and trap or coaching. (Apply to the Secretary, Jackson's-land, Wellingborough.)

WILTS COUNTY ASYLUM, Devizes.—Assistant Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BERRY.—On June 22nd, at Wansford House, Watford, the wife of F Haycraft Berry, M.D., of a daughter.

CROWE.—On June 17th, at Foregate-street, Worcester, the wife of G. Wyndham Crowe, M.D., of a son.

HART.—On June 22nd, at 29, Charlotte-square, Edinburgh, the wife of D. Berry Hart, M.D., F.R.C.P. Edin., of a daughter.

THORNTON.—On June 25th, at 14, Cecil-square, Margate, the wife of Bertram Thornton, of a daughter.

MARRIAGES.

HAYES—LAVERS.—On June 18th, at the Church of St. Peter and St. Edward, Palace-street, Buckingham-gate, S.W., Henry William McCaully Hayes, M.R.C.P., L.R.C.S.E., &c., of Brunswick-terrace, Swindon, Wilts, and late of The Grange, Bangalore, India, to Frances Teresa Mary, only daughter of M. G. J. Lavers, of Stanley-gardens, Kensington-park, W.

LEWIS—COLE.—On June 24th, at St. Augustine's Church, Queen's-gate, by the Rev. C. P. Price, brother-in-law of the bridegroom, assisted by the Rev. Canon Thos. Williams and the Rev. T. Hitchins, Edward John Lewis, M.B. (Cantab.), F.R.C.S., of Hamilton-terrace, N.W., to Georgina Ada, daughter of the late H. T. Cole, Q.C., M.P.

SCOTT TEBB—DALSTON.—On June 19th, at the Parish Church, St. Giles, Camberwell, by the Rev. W. Fisher, Vicar of Alfold, Surrey, assisted by the Rev. E. Swain, William Scott Tebb, M.A., M.D. Cantab., of Charlcombe, Bournemouth, only son of William Tebb, Esq., of Rede Hall, Burstow, Surrey, to Mary Maxwell, second daughter of Henry Maxwell Dalston, of the Glebe House, Champion-hill, Surrey.

DEATHS.

FISHER.—On June 20th, at Sittinghourne, Charles Stuart, younger son of Charles Holdrich Fisher, M.D., aged 25.

KEENE.—On June 18th, at Boulogne-sur-Mer, James Joseph Keene, L.D.S., late of St. George's Hospital, in his 81st year.

SMITH.—On June 20th, at Paris, Henry Smith, M.D. Lond., Barrister-at-law, of Plumstead, aged 32.

SWEET.—On June 20th, at Argyle-street, Hebburn-on-Tyne, William John Sweet, L.R.C.P. Edin., M.R.C.S., aged 40.

WILSON.—On June 20th, at Taptonville-road, Sheffield, Knowlton Wilson, M.R.C.S., aged 80.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, June 30.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

ST. PETER'S HOSPITAL FOR STONE, &c.—4 P.M. Mr. Reginald Harrison: The Diagnosis and Early Treatment of Stone in the Bladder.

Tuesday, July 1.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, July 2.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. William Duncan and others. Dr. Boxall: Fever in Childbed.—Dr. Hurry: Case of Symmetrical Erysipelas followed by Premature Labour, Eclampsia post-partum.—Dr. Lewers: On Plugging the Uterus in severe cases of Post-partum Hæmorrhage.

Thursday, July 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, July 4.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Annual General Meeting. Patients and Card Specimens at 8 P.M. Mr. Brailey: Result of Operation for Immature Cataract.—Mr. Stanford Morton: (1) Foreign Body beneath Semilunar Fold; (2) Aneurysms of Retinal Arteries.—Mr. Spicer: Congenital Dislocation of Lenses. Papers:—Dr. Bronner: Concussion of the Eyeball giving rise to Acute Local Symptoms of Congenital Syphilis.—Dr. Sharkey: On Graefe's Sign.—Dr. Rockliffe: (1) Cephalic Tetanus following Penetrating Wounds of the Orbit; (2) Pyæmic Panophthalmitis.—Dr. Berry: (1) Operative Treatment of Scleral Wounds; (2) Extraction of Foreign Body from Orbit.—Mr. Edgar Browne: Cases of Symblepharon treated by Skin Flap.—Mr. Snell: (1) Paralysis of Convergence; (2) Cellulitis of Orbit. 9.30 P.M. Election of Officers.

Saturday, July 5.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 26th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 a.m.
June 20	30·10	N.W.	59	54	117	72	53	..	Cloudy
,, 21	30·12	E.	64	56	90	72	56	..	Hazy
,, 22	30·18	W.	60	57	101	68	54	·21	Cloudy
,, 23	30·15	W.	64	61	82	70	50	·02	Overcast
,, 24	30·17	W.	64	61	121	80	61	..	Cloudy
,, 25	30·12	W.	60	58	120	80	57	·06	Cloudy
,, 26	29·95	S.W.	61	60	72	64	58	·10	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

MEDICAL ETHICS IN SMALL MATTERS.

Dr. Campbell Black writes to us to express the want of respect (not to use a more forcible expression) which he feels for so-called medical ethics which denounce the infinitesimal delinquencies of men struggling against the competitions of early life in poor neighbourhoods while the sins of leaders are overlooked. He says, for example, that if a man advertise a change of address in the barest way he is apt to be censured, while another shall procure a puffing notice in a lay journal and go unscathed. We recognise a needed warning in this. The less medical men advertise in newspapers even a change of address the better. But let us always have regard to the essential taste and proportion of things. A biographical sketch in a paper called *The Bailie*, which bears clear indication of professional authorship, seems to us to call for a disclaimer and discouragement from the subject of it, as being "advertising" of a much more objectionable kind than the bare intimation of a change of address. We should be glad to hear that men of all schools in Glasgow were free of responsibility for such puffs as appear in *The Bailie* of June 18th.

H. A. B. will find in our Students' Number, published in September last, the information he desires.

North.—No title implying registration being adopted, the law cannot be invoked in the case.

Dr. Carslaw.—The suggestion shall have consideration.

SPASMODIC TORTICOLLIS.

To the Editors of THE LANCET.

SIRS,—It would add to the value of Mr. Collier's notes upon this subject if he were to state whether the sterno-mastoid and the trapezius remain fully capable of action or not. He states that "nothing seemed amiss with these muscles [because?] the patient could rotate her head and retain it in any position." This result might remain although the muscles were paralysed. I have lately operated upon a case of very severe spasmodic wryneck by excision of a portion of the spinal accessory nerve, and also at a subsequent operation by excision of portions of the posterior branches of some of the cervical nerves, as there was spasm of the rotators on the opposite side. The result of these operations was perfectly satisfactory as regards the spasms, and left no appreciable difficulty in the movements of the head, the patient being able to rotate and retain the head in any position she pleased. I cut down upon the spinal accessory in front of the sterno-mastoid, which seems to me a more satisfactory proceeding than following it through the muscles from below.

I am, Sirs, yours faithfully,

Queen Anne-street, W., June 21st, 1890. NOBLE SMITH.

RHEUMATISM AND TONSILLITIS.

THE *New York Medical Record* reports a paper by Dr. William Henry Thayer, in which he confirms recent views as to the frequent association of tonsillitis with rheumatic attacks. He adduces seven cases. One was of special interest as an instance of rheumatism affecting the submaxillary, sublingual, and other glands, together with rheumatic trouble.

Neuropathist.—The monograph in question is by Dr. Magini, and its title is "Alcuni nuovi Caratteri differenziali delle Cellule Nervose" (Some new Differential Characteristics of the Nerve Cellules). It will be found in the new volume of the "Atti" of the Accademia dei Lincei of Rome.

A. R. P.—The discharge from the institution having been complete, fresh certificates are required for readmission.

Dr. A. A. Mackeith is thanked.

HÆMATURIA AND GARDEN RHUBARB.

To the Editors of THE LANCET.

SIRS,—Six years ago my son had a sudden attack of hæmaturia, but having been playing leap-frog at school it was thought probable that the kidneys had suffered some injury. This symptom quickly passed off with rest in bed, and nothing further came of it until a year later, when it recurred, and was again attributed, in the absence of any known cause, to renal injury from athletic exercises; and, there being apparently some tenderness on pressure over one kidney, calculus suggested itself. A third attack followed at an interval of another year, when microscopical examination of the urine, then made for the first time, revealed the presence of numerous octahedral crystals of oxalate of lime with blood-cells. I at once suspected garden rhubarb as the cause, each attack having come on when it was in season and had been freely partaken of. He therefore abstained from that vegetable in future, and has had no recurrence of hæmorrhage. In the early spring of this year I was myself similarly attacked with hæmaturia, accompanied by frequent desire to micturate, and smarting pain in the urethra. The microscope showed abundant sharp crystals of oxalate of lime and blood-cells, and, having just previously partaken freely of stewed rhubarb, I felt convinced that to this the hæmorrhage was due. It is hardly necessary to add that this vegetable ceased to appear at my table.

Not having been able to find in medical literature any notice of such a coincidence, it seems advisable to place it on record, with the object of eliciting the experience of others. It is right to add that on one previous occasion, twenty years ago, I passed blood in the urine, and have also occasionally noticed uric-acid crystals, being somewhat gouty, as further evidenced by a tendency to psoriasis of the nails if tempted to indulge in a daily glass of beer.

I am, Sirs, yours truly,

June, 1890. MEDICUS.

Scipio.—The remark was made by Mr. Justice Wills in March last, in his charge to the Grand Jury at Chester in connexion with the Crewe murder. His lordship said: "The coroner's inquisition could not be too thoroughly understood. It amounted to nothing more than the finding of a true bill by a grand jury."

Dr. Campbell Black.—The letter would make too great a demand on our space.

R. A. should consult his medical adviser.

INFLUENZA OR DENGUE.

To the Editors of THE LANCET.

SIRS,—I see that the question whether the late epidemic was influenza or dengue is still being discussed, especially on the Continent. To the settling of this question allow me to contribute the following.

We are now just getting over the influenza—the first visitation since 1851, I am given to understand. As to dengue, I have seen several epidemics of it on the coast—West Coast of South America. I have seen patients come with it here, more than 7000 feet above sea level, but I have never seen it communicated to anyone. In this it resembles yellow fever.

I am, Sirs, yours truly,

Arequipa, May 12th, 1890. J. O. HUNTER.

Dr. W. J. Collins.—We think the question has been sufficiently discussed; moreover, the election has now been decided.

Newcome.—The better plan is to ascertain the custom which has been followed in the place, and to conform thereto.

"HOME FOR EPILEPTICS."

To the Editors of THE LANCET.

SIRS,—I read in your issue of June 14th that a subscriber is desirous of finding a home for a young epileptic patient aged thirteen. There is such a home near Dresden, which can be highly recommended. For further particulars apply to Dr. Fiedler, Physician to His Majesty the King of Saxony, Dresden, Hallstrasse 1.

I am, Sirs, yours truly,

Dresden, June, 1890. DR. MED. BERTHOLD.

AN IMPROVED FORM OF COLD CREAM.

DR. UNNA has recently written a paper recommending as a substitute for the old-fashioned cold cream a mixture of one part of lanolin with two of benzoated lard and three of water, or, better still, rose water. If the solution of the subacetate of lead or lime water is substituted for this last ingredient, an excellent ointment is obtained, he says, suitable for many skin affections.

Mr. J. M. Redmond.—We published in THE LANCET of Sept. 7th last the information desiderated by our correspondent.

Young Surgeon might consult an article published in THE LANCET, vol. ii., 1886, p. 969.

G. P.—The practice mentioned is not to be commended.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Davies-Colley, London; Prof. Windle, Birmingham; Dr. Campbell Black, Glasgow; Dr. Hadden, London; Mr. E. Owen, London; Dr. Donkin, London; Dr. Snow, London; Dr. R. W. Lowe, Brighton; Mr. Odell; Mr. J. Hector, London; Mr. Winslow, Chicago; Messrs. Hopkinson and Co., Notts; Dr. Wynne, Lowestoft; Mr. Dowdeswell; Dr. Shaw Little, London; Dr. J. B. Hamilton, London; Mr. Clark Bell, New York; Mr. F. Bond, Hull; Mr. Myers, Nottingham; Messrs. Waterlow and Sons, London-wall; Mr. Tunmer, Harrogate; Messrs. Margrave Bros., Llanelly; Dr. Easby, Peterborough; Mr. J. C. Taylor, Las Palmas; Dr. Carslaw, Glasgow; Dr. Brenchley, London; Dr. Miller, Norwood; Dr. Shearer, Liverpool; Dr. Holman, Reigate; Mr. A. P. Hills, London; Mr. Sewill, London; Dr. Berthold, Dresden; Mr. N. Smith, London; Dr. McIntyre, Natal; Mr. Fenton, Barking; Mr. G. Reynalds, Bristol; Mr. Baggetts, London; Dr. Burder, Clifton; Dr. H. Swete, Worcester; Mr. W. Adams, London; Dr. F. B. Giles; Mr. H. Taylor, Guildford; Dr. Kirk, Partick; Mr. H. K. Lewis; Mr. Swan, co. Monaghan; Mr. Hutcheson, Glamorgan; Mr. Vaughan, Indiana, U.S.A.; Mr. Tupholme, London; Dr. Ritchie, Otley; Messrs. Keith and Co., Edinburgh; Mr. Hopper, Worthing; Messrs. Oppenheimer and Co., London; Mr. Considine, Ennis; Messrs. Bates, Hendy, and Co., London; Mr. Saunders, Manchester; Messrs. Brooks, Peel, and Co., London; Mr. Branthwaite, Worcestershire; Messrs. Meggy and Thompson, Chelmsford; Mr. J. B. Browne, London; Mr. Harkin, New South Wales; Mr. Hornibrook, Bloomsbury; Messrs. Wright and Co., Bristol; Dr. McCambridge, Missouri, U.S.A.; Messrs. Gallais and Co., London; Mr. Greenwood, Mansfield; Mr. Empson, North Walsham; Mr. Horne, Scarboro'; Mr. Owen, London; Messrs. Eason and Son, Dublin; Mr. Browne, London; Mr. A. Frost; Mr. Lake, Exeter; Mr. Spearing, Ireland; Mr. Linney, Hastings; Mr. Ellis, Cheshire; Mr. Weaver, Clapham; Mr. Little, London; Mr. Sacker, London; Mr. H. Davis, London; Mr. Branson, Dorset; Mr. McGregor, France; Mr. Robinson, Sheffield; Mr. Rayner, Colchester; Mr. Hilton, Manchester; Dr. Macadam, Edinburgh; Messrs. W. H. Smith and Son, London; Mr. W. R. H. Stewart, London; Messrs. Orridge and Co., London; Dr. Wheeler, Montreal, Canada; Dr. R. J. George, Port Isaac; Mr. Hunter, Arequipa; Mr. Holland, London; Messrs. Read and Co., Bristol; Mr. E. W. White, Dartford; Mr. Steven; Dr. More Madden, Dublin; Mr. Makins, London; Mr. W. A. Lane; Mr. Lennox Browne, London; Miss Reynolds, Hampstead; Prof. Windle, Birmingham; Dr. Munro, Manchester; Mr. W. E. Dawson; Mr. Beach, Darenth; Mr. Deacon, Manchester; Mr. Warre; Durward, London; Medicus; P. J. R. C.; G. P.; Dispensary; A. R. P.; G. C. H., Manorpark; H. & B.; D P. H., London; F.R.C.S.I., London; Pulsometer Engineering Co., London; Udith, Clapham; G. B. D., London; The Librarian, Genova; Zeta, London; In Extremis; Secretary, Swansea Hospital; A. M. O., Devizes; M.D., Mile-end; North; T. S.; Lancs, London; Medicus, Oldham; D. P. H., London; B. Y. X.; W. R. D., London.

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NEWSPAPERS.—*Liverpool Daily Post, Hull Daily News, St. Helen's News and Advertiser, Cork Examiner, Public Opinion, Liverpool Courier, Midland Evening News, Leeds Mercury, Vegetarian, Western Daily Press, Belfast News Letter, Scotsman, City Press, Surrey Advertiser, New York Herald (London), Newcastle Leader, St. Stephen's Review, Sussex Daily News, Bristol Mercury, Northern Whig, Irish Times, Manchester Guardian, Local Government Chronicle, Bradford Observer, Hertfordshire Mercury, Evening Express (Liverpool), Sunday Times, Builder, Scot's Observer, Land and Water, Reading Mercury, Edinburgh Evening Dispatch, Windsor and Eton Express, Architect, Weekly Free Press and Aberdeen Herald, Broad Arrow, Sheffield Daily Telegraph, West Middlesex Standard, Kilkenny Journal, Chemist and Druggist, Dundee Advertiser, The Bailie (Glasgow), St. James's Gazette, Farm and Home, Metropolitan, Temperance Record, Northern News, United Service Gazette, Nottingham Daily Express, West Middlesex Advertiser, Mining Journal, Bath Argus, Spectator, Law Journal, Newry Reporter, Home News, Bucks Herald, Speaker, Glasgow Evening Times, Bakers' Times, Dover Telegraph, Carlisle Journal, Whirlwind, Derby Daily Telegraph, Lincolnshire Journal, Eastern Post, Buckingham Express, Perthshire Advertiser, Kensington News, Norwood News, Southampton Times, Lynn News, &c.* have been received.

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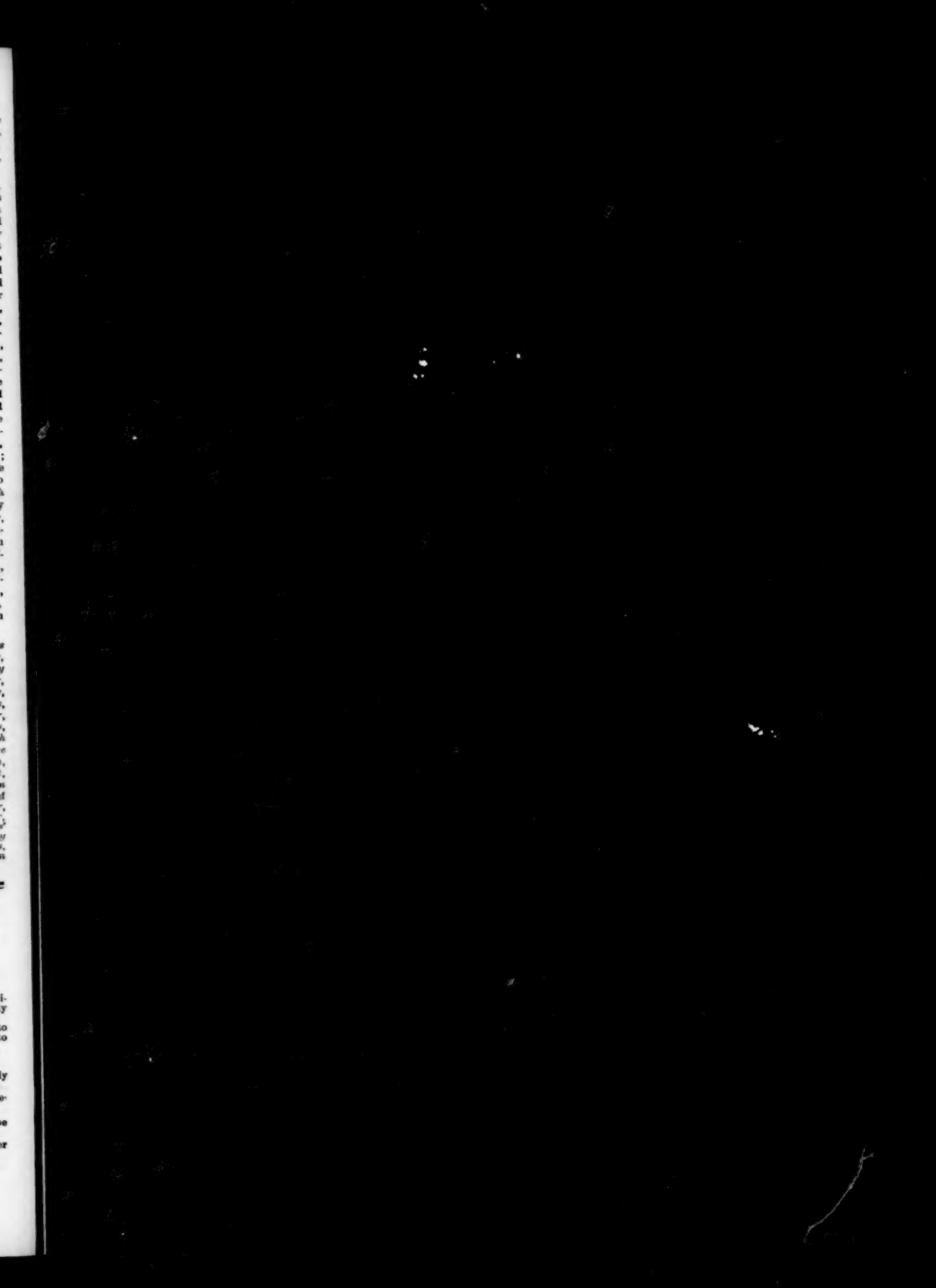
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